

DUN'S REVIEW

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This Month's Cover **SCRANTON, PA.**

In the days of our great-grandfathers, some time between 1800 and 1840, a visitor might have seen Scranton as it appears on this month's cover of DUN'S REVIEW, but he would have called it Slocum Hollow. (Ebenezer and Benjamin Slocum were the operators of a sawmill and of a grist mill, a distillery, and an iron forge on the banks of Roaring Brook.) Perhaps the visitor would have gossiped of the bitter fighting for the land during the Yankee-Pennamite wars, before and after the Revolution; and, all unwittingly, he would have stood above a fortune in anthracite. . . . The cover print appeared in 1857 as a frontispiece for the "History of Lackawanna Valley," by Dr. Horace H. Hollister. The artist is unknown. On the site he depicts, a blast furnace was built in 1840 by members of a family named Scranton. The town became an iron and steel manufacturing center and began developing the nearby anthracite mines. Its mills turned out the first T-rails made for railroads in America. . . . Incorporated as a borough in 1853, Scranton became a city in 1866. Today its population is 140,404, third largest city in Pennsylvania. Its 2,042 retail stores receive a \$56,317,000 trade (1939); its wholesalers handled \$47,770,000 (1935), and the value of its manufactures is put at \$38,489,112 (1937). To a famous correspondence school comes homework from thousands of ambitious Americans. Scranton claims the country's largest Nottingham lace mill. Other manufactures include silk fabric, garments, composition buttons and plastics, grates and stokers, mining machinery, cigars, funeral caskets, railroad cars, and white lead.



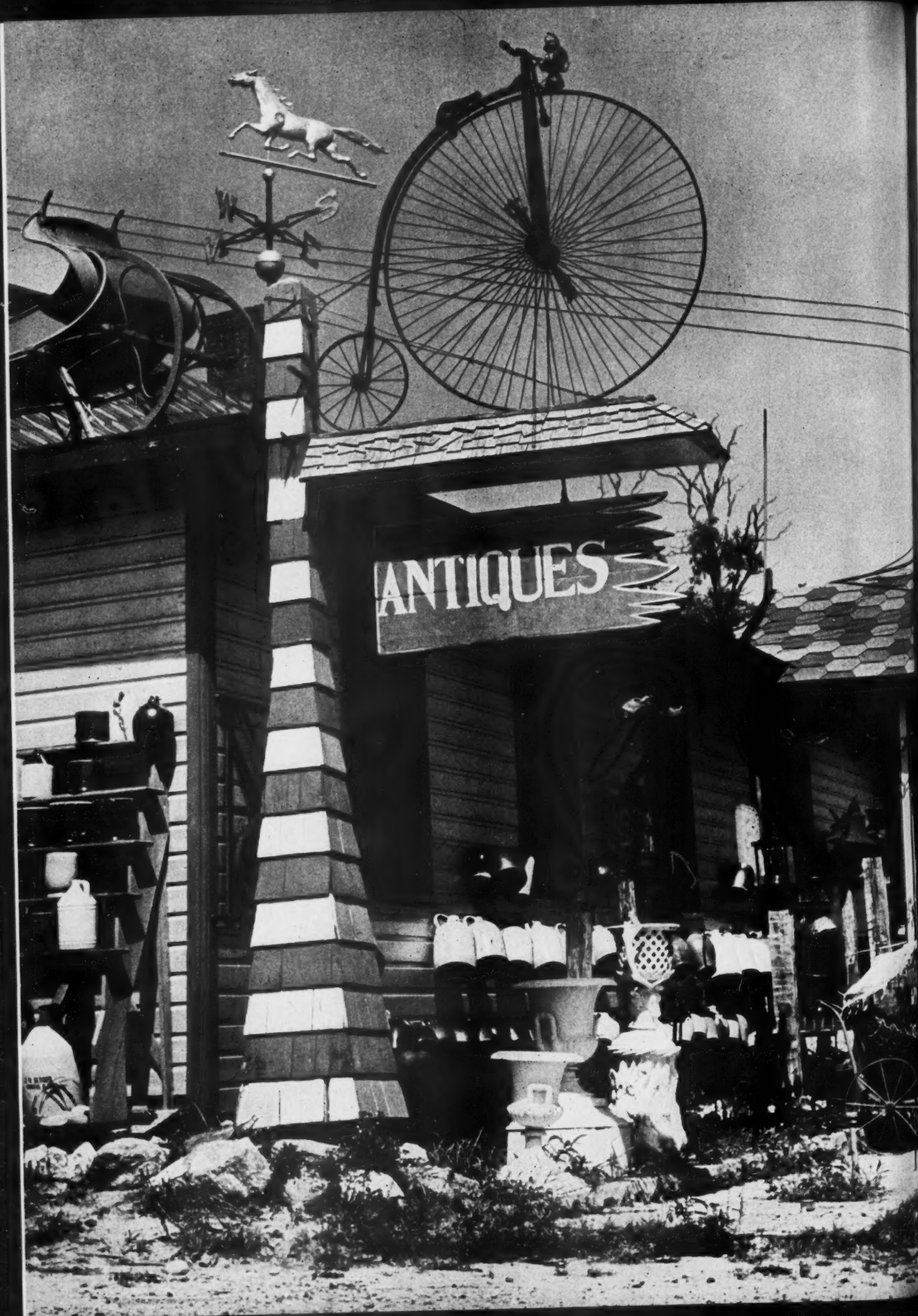
LOOKING OVER EAST RIVER BETWEEN GARGOYLES ATOP SEAMEN'S INSTITUTE, NEW YORK CITY; BROOKLYN AND MANHATTAN BRIDGES IN BACKGROUND—PHOTOGRAPH BY ERISS FROM MONKMEYER

DUN'S REVIEW



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CONVOY IN THE NORTH ATLANTIC—PHOTOGRAPH BY ACME

THE COLD FACTS *about* WARTIME PRODUCTION NEEDS

WILLIAM L. BATT

*Deputy Director, Division of Production,
Office of Production Management*

OUTSIDE the Western Hemisphere the entire world is at war. You may quibble with that statement if you like. The exceptions, and they may not be exceptions for long, do not alter the fact that for the purpose of assessing the inherent danger to us, the world outside the Western Hemisphere is at War.

And so, we must think of the real meaning of our promises to aid Britain to the limit of our ability, and our determination to build our own defenses adequately to guarantee our safety. For I am apprehensive that we are gravely underestimating—dangerously understating—what we are proposing to do if we are to continue to live in freedom and comfort.

There are things that ought to be said bluntly and vigorously; unpleasant and unpalatable things; things

Here a business man, active now in the defense program, stops for a moment to consider realistically just how safe we are in our homes and offices; just what these days mean to us. He gives the answers frankly as he sees them to questions that have been much debated in discussions which, as he has pointed out elsewhere, are likely to be confused by prejudices, by partisanship, and by words that do not mean anything.

of desperately grave concern to all of us—and particularly painful to a people so conspicuously devoted to peace.

And this is a war like no other war before. It is a battle of terrible speed, of lightning surprises, of

new weapons and tactics, of new and graver dangers to the remaining non-belligerents.

What is the fundamental fact about our relationship to this new war? The most important fact of the moment is that we are, by democratic expression of choice, committed to full aid to one side. Now I want to look at this question of aid to one side in the coldest, most realistic terms possible, because it is vitally important to every one of us.

The answer to this question of how far we should go is just as plain as the nose on my face, and I maintain that it can be stated in very specific terms. The answer

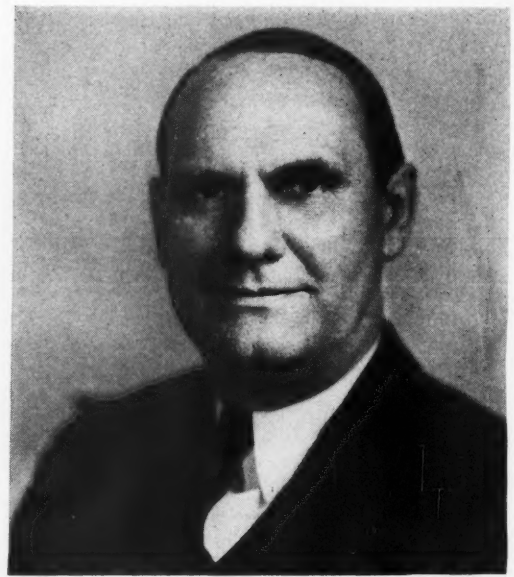
From an address before the Swarthmore Alumni Association, Philadelphia, Pa.

[5]

GRADUATE of the engineering school of Purdue University, William Loren Batt joined the Hess-Bright Manufacturing Company in 1907. In his first year he was made head of the laboratory and in 1916 appointed secretary of the firm. In 1919, when Hess-Bright became affiliated with the SKF Industries, he was made the latter's general manager; four years later, its president.

Chairman now of the Engineering and Industrial Division of the National Research Council, chairman of the board of the American Management Association, and a director of the National Association of Manufacturers, Mr. Batt has in the past been president of the American Society of Mechanical Engineers and chairman of the Co-ordinating Committee of the Seventh International Management Congress.

This year finds Mr. Batt at work in the Office of Production Management, as Deputy Director in the Division of Production.



HARRIS & ZWING

must be based on the answer to a simple question: How does one belligerent defeat another? Almost always, if I understand anything, by having more of what it takes to win. And what it takes to win may be measured in tons and horsepower and various other physical units. If we are committed to full aid to one side—as we are—then we must furnish that side with what it needs to defeat its enemy, in terms of ships, planes, steel, machine tools and other sinews of war. In general, then, we clearly must provide Britain with the necessary quantities of these things so that, added to what she already has and can produce, they will more than equal what the Nazis can get out of Germany plus all the occupied countries.

And what are we sending to Britain today? Last May our total exports to Great Britain amounted to about \$50,000,000. In December of last year they were approximately \$100,000,000. So in seven months we doubled the amount of our exports—mostly war equipment—to Great Britain. On the face of it, that might seem very encouraging. I'm afraid that too many people have seen these figures and then settled back with the comfortable notion that with Britain gaining in strength every day and American aid increasing steadily, it will be just a question of time until Britain, with the help of the United States, will catch up with and then surpass Germany's capacity to manufacture arms.

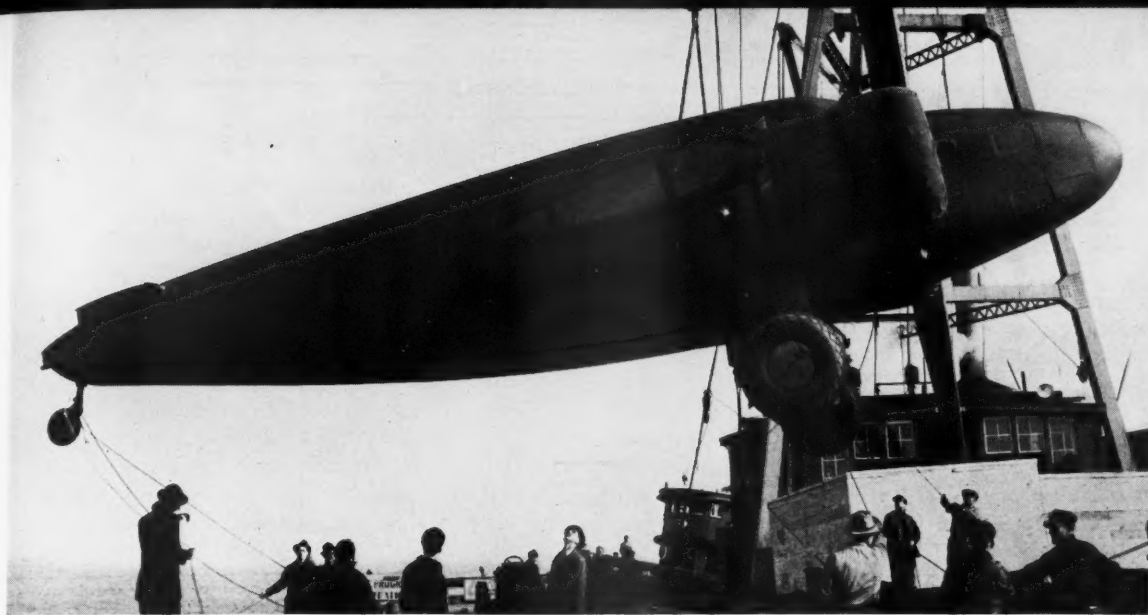
But is there any basis for such a conclusion? There

is not. There is not one shred of evidence that Britain's industrial military strength plus what we are sending and promise to send at the present time is strengthening her position in relation to Germany. Of course, Britain is growing stronger every day. I admit—and have just shown—that aid from the United States is flowing in increasing quantities. But anyone who thinks that is enough or will be enough at the present rate is seriously mistaken.

While Britain is straining every nerve to put out more arms under the terrible punishment of daily air raids, and while the United States is slowly shifting part of its manufacturing facilities to the production of armaments, what shall we assume that Germany has been doing?

The cold, hard truth of the matter is that Germany must have devoted most of its time this Winter to further increasing its already preponderant military advantages over Britain. It started the war with a military machine which our own experts believe could be matched only by an expenditure of about \$100,000,000,000. Their rate of expenditure has increased drastically since that time. To it has been added the productive capacity of the occupied countries, and the huge money tributes which have been exacted from these countries. This must have made Germany relatively stronger.

Since last Spring Hitler has, to all intents and purposes, conquered the continent of Europe. His land armies, already without equal, have acquired tremen-



PLANE FOR BRITAIN—PHOTOGRAPH BY ACME

dous stores of ammunition and equipment which only had to be crated up and carted away. There is no threat in Europe to that army today. It still is awaiting its supreme task—the invasion of the British Isles. But that is not a job alone for millions of men. That attempt could be made with far less manpower than Germany had completely equipped even before the war started. So since the collapse of France last June, Germany's production has been relieved of the necessity of turning out great quantities of equipment for land forces.

All this time British factories have been working day and night to replace the equipment left on the roads of Flanders and the beaches of Dunkirk, and to put guns in the hands of the men who some day soon will be called upon to repel a German attack.

Germany has been able to direct the greater part of its war production capacity to building special equipment needed for what Hitler hopes will be the final phase of the war in Europe—the attack on Britain. This means that the materials and tools and plant space and trained workers that formerly were employed in other lines of armament production have doubtless been put to work building more and more airplanes and small ships and submarines in vast quantities. So not only has the conquest of western Europe relieved Germany of producing armaments for a huge land army, but she has been busy incorporating into the German war economy all the resources of the defeated nations. Britain started later and still must prepare herself on a wider front and must use her productive capacity for all types and varieties of armaments.

Let us go back for a moment to the supplies being furnished to Britain during this time by the United States. I said a while ago that this country shipped in

December approximately \$100,000,000 worth of exports to Great Britain. But since last Summer this country has provided Britain with far less than Hitler has been able to extort from France alone, not to mention Denmark, Norway, Luxembourg, Belgium, and Holland. If we are inclined to rejoice in the fact that we are sending considerable quantities of airplanes to Britain, let us not forget that the aircraft factories of the occupied countries alone probably can more than match our shipments to Britain.

Perhaps it will shock you a bit to hear that the steel producing capacity of the occupied countries is equal to the entire steel producing capacity of the whole British Empire, and is three times as big as our total exports to Britain in 1940. We shipped to Britain in the first twelve months of the war less steel than Luxembourg produces for Germany in a single year. Thus, in terms of this basic war material, our aid to Britain has not been nearly sufficient to match Germany's increased resources.

Consider another thing. At the outset of the war, Germany, with twice the productive facilities for armaments of Great Britain, was spending money twice as fast as Britain. Since then Germany has greatly increased its rate of war spending. How does Germany's war expenditure compare with that of the United States? Translated as best we can do it in terms of dollars, Germany was spending approximately \$1,000,000,000 per month for war when she attacked Poland in September, 1939. That rate is now perhaps nearly doubled and is probably in excess of \$20,000,000,000 per year. The use of forced labor alone probably means that these cost figures are far too low.

The United States, which boasts of the greatest industrial facilities in the world, spent less than \$2,000,000,000 in the final six months of 1940 and will be able

to spend no more than \$6,000,000,000 during the fiscal year ending next June 30; that is, we are now spending at approximately one-fourth the rate of Germany alone. And that does not take into account the huge sums the Nazis are extorting from France, Belgium, and Holland to support the armies of occupation. The factories of these countries are working full-blast for the German armed forces.

The coal and iron deposits of Luxembourg, Lorraine, Belgium, and parts of France are being tapped by Germany. Denmark's shipyards are working to capacity for German orders. Belgium's steel industries and Holland's factories have been commandeered. The resources of these occupied countries have greatly strengthened Germany's economic power, and have to this extent strengthened her military power as well.

Yet in this country we are inclined to sit back and admire the magnificent performance of the Royal Air Force, philosophizing that "There will always be an England." For us to suppose that Britain is growing stronger every day in relation to Germany is criminal folly. For us to enjoy a growing feeling of safety simply because London is still fighting back is the grossest negligence.

What, then, does all this mean? Does it mean that there is no use of our trying to aid Britain—that it is too late? On the contrary, it means that we must double—no, that is not enough—we must multiply by three, four, five and even ten times our present rate of shipments to Britain. Then it will be enough. Then, and only then, will it tip the balance in favor of Britain. Only then will it more than equal the advantage the Nazis already have, plus the further advantage they can extort from the conquered countries. But the "then" of which I speak—the time when our aid to Britain shall be multiplied many times—must be soon or it will be too late. God forbid that anyone can ever say of us—as they now say of France and may yet say of Britain—"they did too little and too late."

Let us not overlook for a moment the gigantic—the

almost terrifying dimensions of the job that is cut out for us. I said publicly some months ago that I had the impression that the American public did not understand the enormity of that task. I am dead sure now that the public does not have the slightest comprehension of the meaning and consequences of this program of dual defense—this goal of becoming an arsenal of democracy. The public is not entirely to blame for that. We who ought to know better because we are closer to it have consistently underestimated the size of the job. That is partly due to the fact that modern war demands the most formidable and at the same time the most delicate combinations of machinery that have ever been produced in volume. For instance, I was astonished the other day to find out just the transmission of one of our medium tanks weighs 7,600 pounds—more than two Buick automobiles. And I have been an engineer all my life.

If the public does not understand what these things are going to mean to the every day life of this country, it is the fault of those who should speak out and tell the truth.

I speak with great conviction when I say that we have made a serious mistake by assuming that we could take this program in our stride—that we could do it in our spare time, using only our idle facilities and our spare materials and without much disturbance to our normal ways of work and business.

We must adopt a new attitude toward this task. You may remember that when Winston Churchill assumed the Prime Ministership he told the British people he could promise them nothing but "blood, tears, toil and sweat." So long as Britain still fights, we shall not be forced to spill our blood. But we shall certainly have to accept our share of the toil and sweat if we are going to keep Britain on her feet, and thereby keep the war across the Atlantic.

Let us drop the fiction that we can perform a modern miracle of industrial transformation without hurting anybody. If we are going to do this job, thousands of businesses and millions of people are going to be upset and disarranged and discomforted.

For my part, I believe that the American public is ready to make the sacrifices now clearly demanded. I believe that the American public wants to be told the truth. The truth as I see it is that if we are going to produce the guns that we must have, then here and there we most certainly are going to get less butter. While we are doing a good deal today, we are not doing

(Continued on page 49)

BUNDLES FOR BRITAIN—PHOTOGRAPH BY HARRIS & EWING





COTTON GIN IN ORANGEBURG, S. C.—PHOTOGRAPH BY JAMES SAWDERS FROM CUSHING

PROSPERITY IN THE SOUTH

A SEPARATE AND EXCEPTIONAL EXPANSION OF BUSINESS
ACTIVITY REFLECTED BY THE REGIONAL TRADE BAROMETERS

L. D. H. WELD

Director of Research, McCann-Erickson, Inc.

THOSE who have been following the Regional Trade Barometers published monthly in *DUN'S REVIEW* must have been struck by the consistency with which the indexes for the southern districts have kept ahead of the index for the United States as a whole ever since we began to emerge from the great depression. The improvement in the South has now lasted so long, and has been so marked, that it can be considered one of the most important business developments of recent years.¹

The improvement in the South, as compared with the rest of the country, is shown first in the chart on page 11, which gives the percentage increases in the Regional Barometers in 1940 over

1933, the low year of the depression. Since the bottom of the depression the South has improved by 75.9 per cent, as compared with 50.6 per cent for the whole country. The Midwest has improved by 57.1 per cent, and the West, by 56.2 per cent, while the Northeast (comprising New England, New York, New Jersey, Pennsylvania, and Delaware) have worked out of the depression only to the extent of 31.8 per cent.

Not 1940 Alone

This situation is not peculiar to 1940 alone, as is evident in the barometers for the four principal sections of the United States since 1935 (on page 10). The base period of the barometers which appear each month in a special section of *DUN'S REVIEW* is 1928-1932.

The South has kept well ahead of the other sections of the country for the past six years, and in 1940 it averaged 118.0. The corresponding figure for

the whole country in 1940 was 94.9. The West and Midwest have kept closely together, and the Northeast has stayed behind. It should be mentioned that the lagging of the East is not an indication of lack of progress, but simply that the newer sections of the country have naturally been progressing faster.

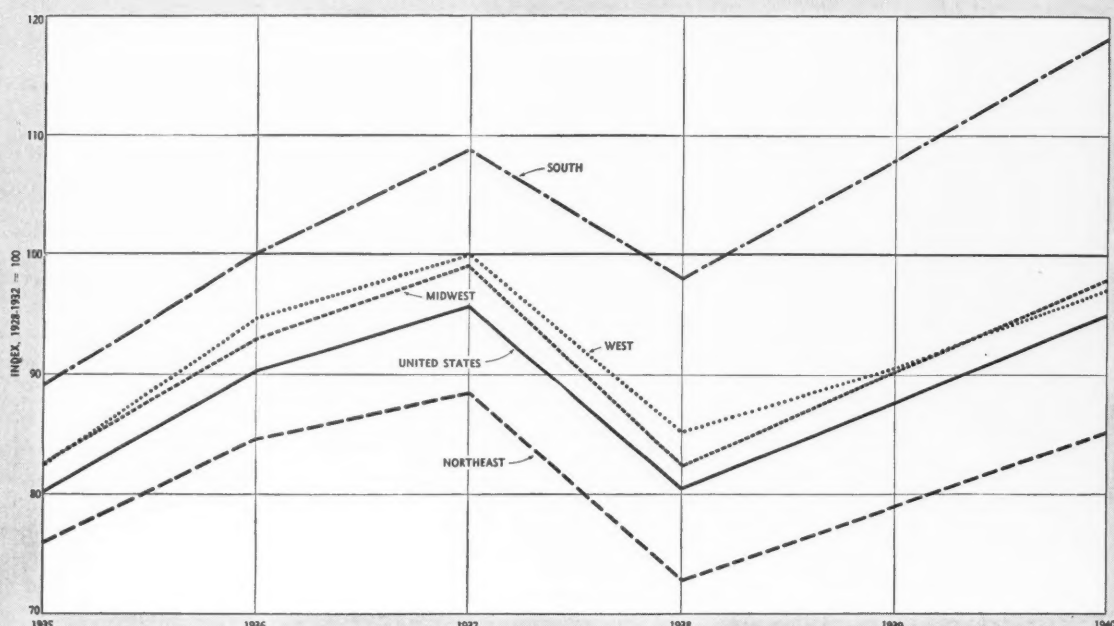
Another way of looking at the South's progress is to examine the extent to which it has recovered to the top year of 1929. In 1940 the country as a whole was still 23.6 per cent below the all-time high of 1929; the South, 4.2 per cent below. Other sections were still below by these percentages: Northeast 31.5; Midwest 22.0; West 21.5.

With the growing prosperity of the South, it is interesting to see whether population in that section has grown faster than in the United States as a whole. In the first place, let's look at the increase for this section as a whole from 1930 to 1940, as compared with

¹The regions which constitute "the South" for this article are as follows: 18, Baltimore-Washington (Maryland, Virginia, and District of Columbia); 19, North Carolina and South Carolina; 20, Atlanta-Birmingham (Georgia, Alabama, and part of Tennessee); 21, Florida; 22, Memphis, (Arkansas, part of Mississippi, and part of Tennessee); 23, New Orleans, (part of Louisiana and part of Mississippi); 24, Texas (Texas, part of Louisiana, part of New Mexico, part of Arizona, and four counties in Oklahoma).

TRENDS IN CONSUMER BUYING IN FOUR SECTIONS OF THE COUNTRY, 1935-1940

REGIONAL TRADE BAROMETERS; INDEXES, 1928-1932=100



the United States and with the other major sections:

POPULATION INCREASE, 1930-1940	
	Per Cent
United States.....	7.2
South.....	11.3
Northeast.....	4.8
Midwest.....	3.9
West.....	17.2

While the United States gained 7.2 per cent in population during the past decade, the South gained 11.3 per cent. This is significant, because prior to 1930 the South's growth, except in Florida, had been slower than that for the whole country. In fact, for many decades there had been a tendency for Southerners to move to other parts of the country. Even so, the West still leads in population growth, with a 17.2 per cent increase during the last decade, as compared with only 4.8 per cent and 3.9 per cent gains in the Northeast and Midwest.

Compared with the 7.2 per cent population increase for the country as a

whole from 1930 to 1940, the increases in individual southern States were:

POPULATION INCREASE, 1930-1940	
	Per Cent
Florida.....	29.2
North Carolina.....	12.7
Louisiana.....	12.5
Maryland.....	11.6
Tennessee.....	11.4
Virginia.....	10.6
Texas.....	10.1
South Carolina.....	9.3
Mississippi.....	8.7
Georgia.....	7.4
Alabama.....	7.1
Arkansas.....	5.1

It will be seen that all the southern States except Alabama and Arkansas increased in population faster than the country as a whole. The District of Columbia which increased 36.2 per cent for obvious reasons is not listed. Otherwise, Florida showed by far the greatest increase (29.2 per cent), although the gains in North Carolina, Louisiana, Maryland, Tennessee, Virginia, and Texas, were all substantial, for each exceeding 10 per cent.

In examining the advance of the South, we must look at the growth of manufactures in that region. In the first place, the value of manufactures in the twelve States that most nearly correspond to the seven southern regions covered by the Regional Barometers has been as follows in recent census years:

	Dollars
1929.....	8,364,136,000
1933.....	4,489,693,000
1935.....	6,186,653,000
1937.....	8,597,900,000
1939.....	8,565,649,000

Manufactures have long since passed agriculture as a producer of wealth in the South. If we go back to 1909, the value of manufactures in the South was only \$2,145,000,000. If we include West Virginia, Kentucky, Missouri, and Oklahoma with the other twelve southern States, the value of manufactures in 1939 was \$11,189,000,000. This was 19.7 per cent of the United States total.

Note also that in 1939 manufac-



GRAPEFRUIT TREE, CLEARWATER, FLA.—PHOTOGRAPH BY CHARLES PHELPS CUSHING

tures in the South exceeded what they were in 1929. For the country as a whole the 1939 value of output was still 17 per cent below the 1929 figure.

The principal manufacturing industries of the South, measured by value of products, according to the 1937 Census, were as follows: petroleum refining; tobacco products; cotton manufacture; lumber and timber products; meat packing; cottonseed oil, cake, and meal; iron and steel; bread and

bakery products; printing and publishing; fertilizer; and flour.

Although not yet ranking near the top, the following industries have been growing in importance in the South during recent years: paper and pulp, chemicals, rayon, and canned goods.

It is interesting to look at cotton manufacturing because of the shift from New England to the South. The change that has taken place is brought out by the following figures:

COTTON MANUFACTURES IN THE SOUTH

	Value of Products Dollars	Part of Total Per Cent
1909.....	232,989,000	37.1
1933.....	595,868,000	70.2
1935.....	717,136,000	69.6
1937.....	930,885,000	73.2

If we go back 30 years we find that the South accounted for only 37.1 per cent of the United States cotton manufactures total. In 1937 it was nearly 75 per cent, and the trend to the South has been continuing during recent years.

In 1939 the South also had 74.4 per cent of the cotton spindles of the country, had 67.3 per cent of the looms, and accounted for 84.5 per cent of the total consumption of raw cotton.

The census figures do not reveal all that has been taking place recently in the development of manufactures in the South. We read of important new plants that have been projected in the South during the past year. For example, in Louisiana, two big sulphite pulp plants, enlarged oil refineries, new chemical plants, and plants to manufacture asphalt and insulating board, are under way.

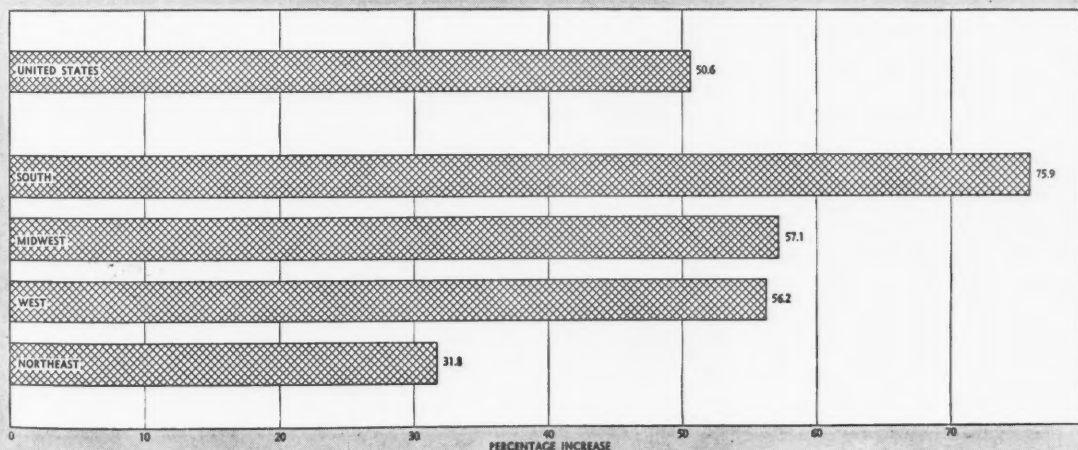
It has been reported that in Alabama more than \$85,000,000 of new capital has been invested in various industries in the past three years. These include a sulphite pulp plant, an aluminum plant, a plant to manufacture insulating board, and a large investment in iron and steel.

There are also new sulphite pulp, rayon, and glass plants in Georgia; pulp plants in South Carolina; pulp, cellophane, rayon, and chemical plants in Virginia; and a great variety of plants in Texas, such as canning factories, paper and pulp, cement, chemicals, and so on.

The South has also been increasing faster than the rest of the country in mineral production. It has been making better use of its natural resources than ever. It has 100 per cent of the

INCREASES IN CONSUMER BUYING IN FOUR SECTIONS OF THE COUNTRY, 1940 OVER 1933

PERCENTAGE CHANGES IN REGIONAL TRADE BAROMETERS



nation's supply of sulphur, phosphate rock, and bauxite (aluminum ore). Petroleum production has greatly increased, and constitutes over 60 per cent of the nation's total; iron ore production is important; it has large supplies of coal, clay, feldspar, mica, and other minerals. The South now accounts for about 38 per cent of the value of the country's mineral output.

Agriculture

In 1939 the value of the South's agricultural crops was \$1,164,000,000 and the value of its livestock products \$582,000,000, making a total of about \$1,750,000,000, or nearly 23 per cent of the United States total. Incidentally, Government payments to southern farmers in that year were \$313,000,000, or 39 per cent of the country's total.

The leading agricultural crops, in value, were as follows: cotton, corn, tobacco, garden vegetables, sweet potatoes, peanuts, citrus fruits, deciduous fruits, rice, and sugar cane. The South also grows hay and sorghum, wheat, and potatoes. Some of these crops, of course, are grown almost exclusively in the southern States.

Cotton is of course still the great crop, but the value of the cotton crop is not what it used to be. From 1916 to 1920, it averaged over \$1,300,000,000 per year. Even in the early twenties it averaged over a billion. It got up to about \$700,000,000 in 1936, but during most recent years it has been worth less than \$600,000,000. Low cotton prices have kept down the total value of the crop.

The significant thing is that the cotton crop is not relatively so important in the South as it used to be. Before 1920 it was about half of the value of all crops and livestock products. During the early thirties it was running between 30 and 40 per cent, but in 1939 it dropped to only 25.4 per cent. Diversification of agriculture, so long preached in the South, has actually been making headway.

Tobacco continues to be an important crop. Livestock production has not

grown as rapidly as agricultural experts would have liked. The citrus crop of Florida has grown in importance—especially grapefruit. The development of grapefruit and oranges in Texas is notable. As recently as 1935-1936 Texas shipped only 5,200 carloads of grapefruit; in 1938-1939 she shipped 19,500 carloads. Her orange shipments increased from 1,500 to 5,800 carloads during the same period.

Winter vegetables have gained greatly in importance during recent years. Twenty years ago there were about 230,000 acres in vegetables in the principal southern States. Today there are well over a million. The principal States are Texas, Louisiana, Florida, South Carolina, and Georgia. The principal reasons leading to this development are better transportation, decline in prices of competing agricultural products in the South, and the year-round demand for fresh vegetables in the North.

This account of southern agriculture is very brief, but it is sufficient to indicate the change that has been taking place during recent years, especially in

the direction of diversification. Greater use of fertilizer and more intelligent methods of soil conservation are also characteristic of southern agriculture.

Some of the fundamental reasons for the South's rapid advance during recent years are as follows:

1. There has been a shift of industries to those regions where important raw materials are grown or found. This applies not only to the cotton industry, but to paper and pulp, chemicals, petroleum products, and rayon.
2. Lower wages in the South have attracted industry.
3. An influx of capital from the North has been important.
4. Development and diversification of southern agriculture have been taking place.
5. Discovery of new supplies of oil, and discovery and development of other raw materials have been important factors.
6. Increase in resort travel has helped, especially in Florida.
7. Finally, and not least important, a new spirit of enterprise and aggressiveness has been developing in the South.

SWIVEL AND HOIST ON AN OIL DERRICK—PHOTOGRAPH BY MEISEL FROM MONKMEYER



POSTWAR DEPRESSIONS

WILLARD L. THORP

*Trustee, Associated Gas & Electric Corporation;
Director of Economic Research, DUN & BRADSTREET, INC.*

JOHN ADAMS once said:

"I am old enough to remember the war of 1745 and its end, the war of 1755 and its close, the war of 1775 and its termination, the war of 1812 and its pacification. Every one of these wars has been followed by a general distress, embarrassments of commerce, destruction of manufactures, and the fall of the price of produce and lands."

Had he lived long enough, and had his vocabulary had a sufficient number of additional synonyms for "end," he might have added the Mexican War, the Civil War, and the World War to his list of American postwar depressions.

If the former president had made a similar examination of the history of England, he would have learned that an economic crisis followed the conclusion of the Dutch War in 1672, and would have noted the collapse in 1763 of the brief but excited boom which followed the Peace of Paris ending the Seven Years' War with France. He certainly would have added to his list the severe business distress which developed in 1815, shortly after the Battle of Waterloo.

He might have been surprised to learn that the peace which ended the war between Brazil and Paraguay in 1872 ushered a long and severe depression in to Brazil, and that the culmination of the Russo-Japanese War in 1905 had similar economic consequences for Japan. The ending of the Boer War in 1902 resulted in a trade and land boom in South Africa, promptly followed by a prolonged depression. And he would have brought his list to a grand climax with the supreme instance of postwar distress—the experience of the whole world after the World War. The collapse in 1920, be-

ginning in Japan, spread rapidly to other countries, an economic catastrophe from which some nations never really recovered.

The old saw that "history repeats itself" is thus strikingly exemplified. Despite the interval of years, and they



HOBART PHOTOGRAPH

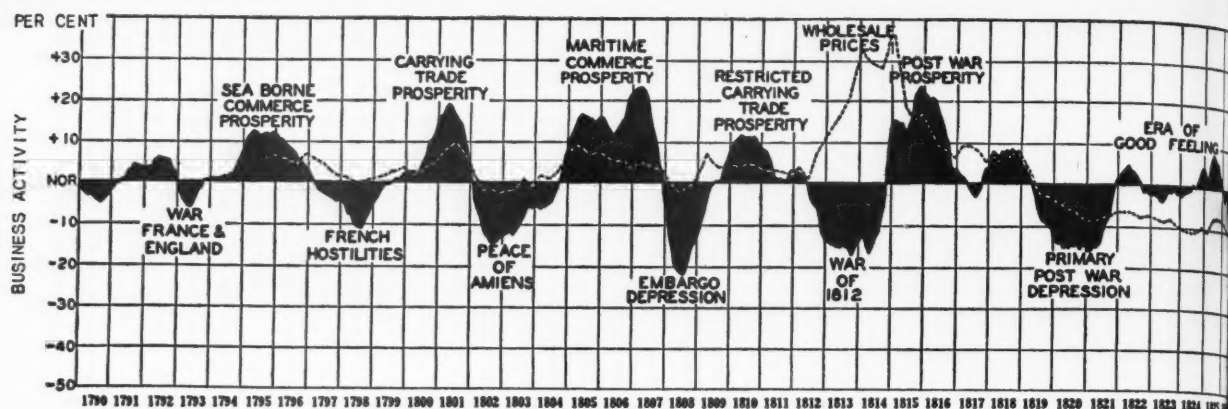
are years of marked and significant economic changes, the experience of England at the end of the Napoleonic Wars, of the United States at the close of the Civil War, and of both countries at the end of the World War afford astonishing parallelism. In each case, the years of the war, except perhaps the early months, were years of economic activity, full employment and a large volume of production. Commodity prices were rising and speculation was active. Profits were high and business failures few. The years were generally described by contemporary writers as prosperous. After Waterloo, after Appomattox, and after the Armistice there were temporary booms with prices soaring, and wild speculation. But in each instance, a catastrophic economic crisis soon followed. Speculators sought markets for their unwanted goods and prices fell with amazing rapidity. The activity relapsed into dullness, and the nation sank into business depression with idle mills, widespread unemployment, and many business failures.

The cases are sufficiently numerous

and the records sufficiently reliable to justify the historical proposition that, while at war, nations have been seemingly prosperous, their workers fully employed, and their industries active; but that the declaration of peace has brought, within a short time, a marked recession, introducing a period of depression which may be prolonged.

It is significant that such an hypothesis does not demand that the penalty of economic distress be paid only by the vanquished nation. Strangely enough the record shows that often times the victor has suffered more severely than the defeated nation. For example, a widespread economic crisis developed in 1873, soon after the culmination of the Franco-Prussian War. Germany, the victor in the war, was probably the most distressed of all nations, whereas France was barely touched by the general malaise. Nor can one, comparing the economic conditions of England and Germany in the decade of the twenties, make any demonstration, that the victor had much the better of it.

On this point it should be noted that the vanquished nation usually has certain payments which it is required to make in accordance with the terms of the peace. From the economic point of view, there is little difference between shooting away economic goods or donating them to another nation. In a sense, the economic processes of war are continued throughout the period of reparations. This tends to maintain in the vanquished nation those conditions which engendered the prosperity during the war itself. Furthermore, the nation making such reparations has thus more opportunity consciously to adjust and adapt itself to peace conditions by a process of gradual change. In contrast, the victorious country finds



its position suddenly reversed. Instead of shooting away part of its product, it now receives additional income as a gift. Individuals have been quickly demoralized under similar conditions.

As a brief footnote, it should be added that the war-and-peace forces may also greatly affect the so-called "neutral" nations. Political neutrality does not emasculate international economic forces. During the World War, the Scandinavian countries, though politically neutral, reflected the war prosperity of the belligerents and unfortunately were dragged down into the general subsequent depression. Sweden and Switzerland suffered along with the rest of the world during the early twenties. Neutrality does not provide a complete protection from the prosperity-depression pattern.

What are the underlying forces which have created this economic pattern so consistently? Why have nations seemed so prosperous, when much which they were laboring to produce is going up in smoke or down to the bottom of the sea? And why, when the wastes of war ceased, did depression appear to be inevitable?

The answer could cover the detailed operations of the entire economic system, but it is necessary to mention only the major forces. The great burst of activity stems naturally enough from the requirements of war itself. A new industry is created; and a gigantic new customer suddenly appears. Certain business enterprises are transferred

bodily from their normal pursuits to the manufacture of war materials, leaving the field to their erstwhile competitors. Excess capacities disappear. A large number of workers are shipped off to non-productive war-making, thus greatly benefiting those remaining at home by removing themselves from the competition for jobs. This small num-

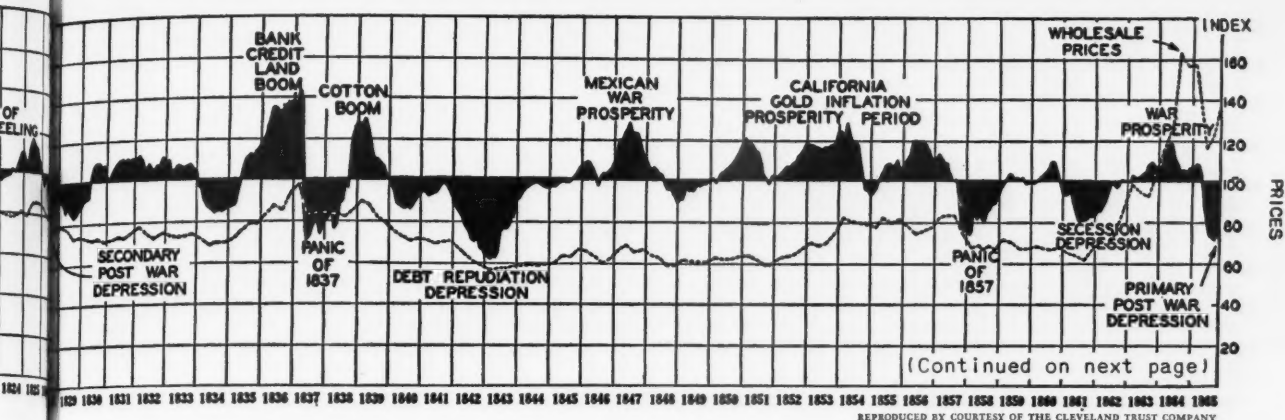


CUSHING PHOTOGRAPH

ber of remaining workers, stirred by patriotic and other motives, succeeds in maintaining the quantity of the output without their brothers' aid. It is not surprising that, in every month between 1915 and 1919, production was above "normal," although in 1918 there were nearly five million men under arms. Furthermore, the government enters into many economic markets to make purchases. And since the government is not dominated, at such times at least, by strict motives of economy but rather by an overwhelming desire to make sure that the war be written down in history as a victory, it has not always bargained carefully with the business specialist. The win-the-war motive is helpful in certain other respects making for this apparent pro-

perity, such as reducing labor troubles, permitting extensive government regulation of the distribution of goods, centralizing transportation facilities, and bringing cheap labor, especially women, into the market.

As a concurrent development, wars have usually brought inflation and rising prices. It is theoretically conceivable that a war might be financed entirely from income, through taxes so arranged as to reduce the volume of consumption while increasing the volume of production. Napoleon's wars did not create a large national debt because he met his needs from the current income of his subjects, and by immediate levies upon defeated areas. But with the high cost of more recent war-making, this is only a theoretical possibility, and is certainly not in accordance with the practice of modern governments. Actually, the extraordinary costs are met in large part by either currency or credit expansion. In this country, during the Civil War, the currency was greatly expanded through the issue of greenbacks; during the World War, the banking system created a great volume of credit. Such inflation, by increasing the amount of purchasing power without changing the quantity of available goods for purchase, tends to cheapen money and raise prices. It is significant that the three outstanding peaks in the level of commodity prices in the history of the United States were all at the close of wars—in 1815, 1866, and 1920. This in-



crease in prices has a very definite effect on business conditions. Just as an individual hastens to buy his automobile if he hears that the price is to be advanced in the near future, so the alert business man times his purchases according to price movements. If prices are rising, the manufacturer hastens to obtain raw materials, the retailer fills his shelves with goods, and the careful housewife makes certain that her sugar barrel is full.

Rising prices, while thus stimulating regular purchasers, also arouse speculators. Persons enter the markets who have no desire to use or consume the products themselves, but purchase with the intent to resell in the same market at a later date, and at a higher price. To the manufacturer, the demand from the speculator is just as real as that from a bona fide consumer, and his production is further stimulated. Rising prices, therefore, create industrial activity, and the inflation which caused them must be regarded as a major force in bringing about these conditions which we call prosperity.

War Boom

So the war has brought prosperity. The mill wheels are turning; the workers are employed; the pay envelopes are full; and dividends are paid regularly. Of course, we must assume that the country is not seriously invaded, and that there are no painful incidents such as a rigid blockade. There are sure to be some slight in-

conveniences, but even these may have their silver lining—for example, the man who discovered the real taste of coffee when his patriotic fervor plus high prices reduced his usual quota of sugar per cup. Occasionally, the effects of war are extremely severe, as witness the distress of New England during the War of 1812, because of our nation's self-imposed embargo, but these have been exceptions to the general pattern of war history.

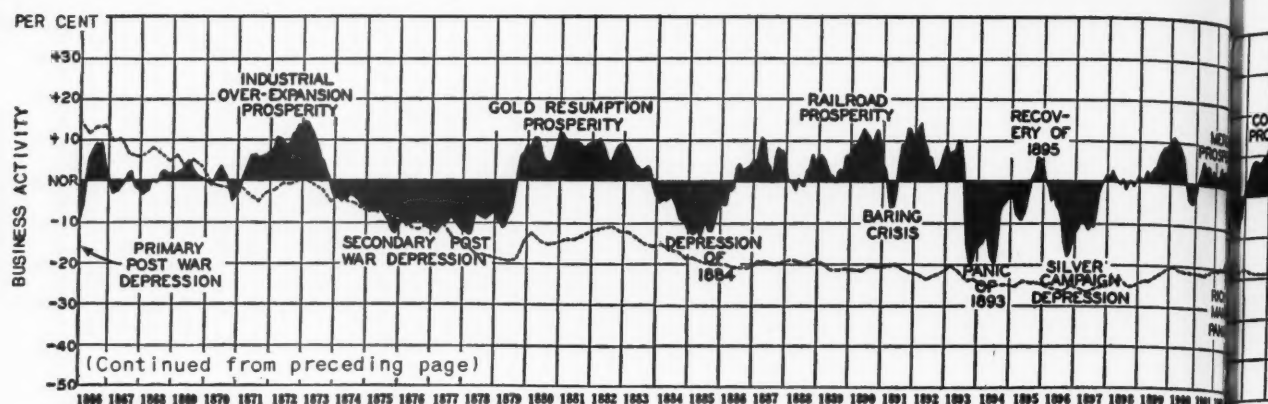
The cause of the prolonged period of prosperity during war-making lies primarily in the extraordinary increase in consumption, particularly war materials, paid for by means of currency or credit expansion. The war destruction prevents the accumulation of any deleterious surplus, and permits a volume of production which might, in normal times, destroy itself.

The obvious conclusion from the argument thus far is that a wise country should keep a comfortable war under way all the time. We might even make use of the newer statistical techniques to control the activity at the front in such a way as to give us the maximum of prosperity in the rear. Those who have worked so hard on plans for the stabilization and steady expansion of production and prolongation of prosperity have failed to realize that these objectives can easily be obtained if only General Headquarters would carefully scrutinize the latest index numbers, sending an additional army corps to the front with every decline in the index

of production of say 2 per cent, until the recession in business had been halted. If the rate of expansion seemed to be threatening the maintenance of the prosperous level, then all that is necessary is to withdraw men from the front until the threat of excessive prosperity is removed. What could be simpler? It is probable that more tender-hearted persons can use these same theoretical grounds as the basis for some solution on a higher plane, such as the holding of mass Olympic Games during periods of depression, or even the use of a fluctuating WPA program.

The Aftermath

But, to return to our proposition: if and when, by some mischance, the war is allowed to terminate, there is a depression. What causes it? Must war inevitably be followed by economic distress? The collapse is the logical result of the forces which caused the prosperity. The inflation is never permanent, for prices do not rise forever. The turning point is usually reached rather quickly after war ceases, though there may be a few months of excited speculative activity. However, government orders and expenditures are inevitably reduced. Falling prices, especially when they are as sharp as in 1815, 1866, and 1920, afford no encouragement to business. Purchases are delayed. Stocks on hand are dumped on the market. Banks and other creditors press for payment of loans. Unemploy-



ment appears and reduces the purchasing power of the community, further cutting into business activity. Mills are idle and markets are dull. Dividend checks are reduced or never sent. The social effects of such a period on health and happiness are immeasurable, but such indicators as the marked increase in number of suicides in 1921 over 1919 and 1920 cannot be disregarded. This postwar depression often lasts for several years. In the case of South Africa, the recession after the Boer War began in 1903, and there was no revival until 1909.

Government Withdrawal

The sudden withdrawal of the great beneficent new employer and customer is the major factor here. The workers who have been away at the war return to find their places taken by others or by labor-saving machinery. The factories which were transformed into creators of munitions and other war paraphernalia return to their peacetime occupations to find their places taken by other producers. Exporters turn eagerly to their foreign markets only to discover that other countries have taken over their connections. Furthermore, new construction, changes in technique, and improvements which have been delayed by the war are now developed rapidly, and their influence is felt when they are least wanted. Contracts let for new industrial buildings in 1918 and 1919 involved more floor space than in any year since. These

buildings, if completed at all, were ready for use when we were entering, or already in, the depression of 1920-1921. Wars do not come often enough to impress upon business men the hazards of immediate postwar expansion. It is inevitable that the disappearance of the particular market for which so much of the economic system has been reorganized will cause many points of maladjustment.

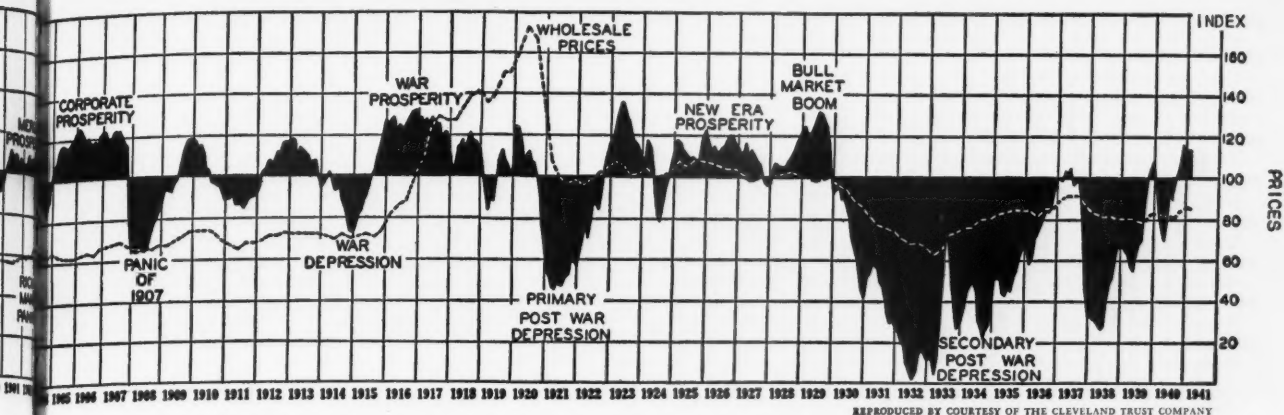
There is one further element disclosed by the historical record; namely, that the war process may bring about some structural change in the nation's political or economic system, requiring a whole series of adjustments in the postwar years. The change might have been inevitable, in the course of time, but the war at least affected its speed and timing. The Russian and German political revolutions were both products of the World War. The shift of the United States from a debtor to a creditor nation, the disappearance of gold as the accepted world monetary base, the changes within the British Empire in the relationship between mother country, the colonies, and the Dominions, the creation of new states in Central Europe—these and many other structural changes disturbed the smooth functioning of the economy in the post-World War years. On the historical record, one must accept war as a major reorganizing force, and one which does not necessarily do a neat and quick job. It has often left areas of disturbance which have taken many

months and often years to become adjusted.

The pattern which I have outlined is based on the war record of the last several centuries. The extent to which the proposition is valid depends in large measure on the relative importance and duration of the war and the degree to which the involved nation concentrates its economic energies upon victory. For example, our war with Spain was so sudden and brief an incident that its economic effects were slight, and one would not be justified in laying the recession of 1900 at its door, although it is worthy of note that there was a mild downturn in that year. On the other hand, when we entered the World War, we disregarded our traditional principles of laissez faire, of the rights of private property, and even of free speech. We introduced price fixing, government control, priorities, conscription—in fact, a virtual reorganization for a single purpose, to win the war. Such a complete transformation could not help but have notable economic consequences.

Total War

War-making has become a most serious business. Once upon a time, nations fought as two women might bicker over the back fence, without any serious delay in the process of hanging out the clothes. Today, the neighbors are called in and forced to take sides; elaborate and costly instruments for conflict replace those given by nature;



REPRODUCED BY COURTESY OF THE CLEVELAND TRUST COMPANY

and the hanging of clothes is completely forgotten. The increasing concentration of the life of nations on the single purpose while making war, means that the economic consequences of wars are becoming more and more severe. The depression after Waterloo centered in commercial and financial circles, and the bulk of the population was little affected. But the effects of the depression of 1920-1921 were felt throughout many countries, from north to south and east to west—farmer, laborer, manufacturer, worker, broker and consumer were all involved.

Direct Destruction

It is not enough to recognize this trend in considering the present war. The change in the nature of war-making is too great, and the consequent economic problems shift to an entirely different level. The historical analysis with its prosperity-depression pattern regards war as a dislocating factor requiring major adjustments and readjustments. The economic effects of past wars have been chiefly indirect, the actual war processes being geographically localized and the destruction being chiefly that of war materials and men. The present war is directly destructive of the basic wealth of the nations involved. There is no limited battleground, and evidently victory is to be achieved by the greatest destruction of the productive facilities of the enemy.

The old pattern—prosperity and de-

pression—implies a swing around some sort of normal trend line. But if one introduces devastation and destruction on anything like the scale now experienced, the concept of "prosperity" during the war, always somewhat ironic, becomes unusable. And the con-



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cept of depression thereafter must be strengthened by some word implying a breakdown, a disorganization, a tragic poverty, although the reconstruction activity may meet some of the statistical criteria of prosperity, just as happens during war periods. For the belligerent nations, such a condition seems the inevitable result of any prolonged continuance of the present conflict. There have been devastated sections before—battlegrounds, floods, earthquakes—but there have been other wealthier areas able to help them to rehabilitate themselves. But if all of Europe continues the destruction of capital and human beings, it is impossible to see any easy recovery from the setback. The reconstruction will have to be carried on in terms of exceedingly limited resources, and that will require a strong centralized organization for

planning and control. There will have to be strong governments to maintain order. It is conceivable that some group or nation might take care of itself, at least temporarily, by exploiting the remainder of Europe, but the resources to exploit are being destroyed daily. Such a picture is so far beyond the experience of history that one can only shudder at it. Our modern economic systems, our methods of life, are built on capital accumulation and the productivity of such capital. Its destruction cuts from under the whole basis of our living standards. Perhaps Europe will go through the slow, hard processes of accumulation and development of the pioneer days in new countries. There seems to be more likelihood of the "strong government" approach in all of Europe, adapting and perhaps modifying the patterns of Russia and Germany.

American Policy

For American national policy, one basic problem will be that of the degree to which we shall participate in the rebuilding of Europe. The answer may depend in part on the outcome of the war. But regardless of that, we cannot forget the extent to which we provided capital for rebuilding after the last war, and were left with frozen and then evaporated assets. After the war, Europe will have even less promising sources for repayment.

The historical pattern may have more
(Continued on page 46)

I. INFLUENCE OF SIZE OF TOWN AND SIZE OF CONCERN ON RETAILING SALARY AND WAGE EXPENSES, 1939

(Expenses appear as average percentages of net sales, in about 26 trades)

POPULATION	ANNUAL SALES VOLUME					
	Less than \$10,000	\$10,000- \$20,000	\$20,000- \$30,000	\$30,000- \$50,000	\$50,000- \$100,000	\$100,000- \$300,000
WAGE EXPENSE						
Less than 20,000	5.9	7.2	8.4	9.3	10.4	11.2
20,000 to 100,000	8.6	8.6	10.0	10.4	11.8	12.2
100,000 to 500,000	7.8	7.9	9.9	10.9	11.8	12.0
Over 500,000	8.0	8.0	9.7	10.6	11.5	12.0
SALARY EXPENSE						
Less than 20,000	15.5	12.8	10.7	9.2	7.3	6.7
20,000 to 100,000	13.3	13.2	11.1	10.0	7.4	6.9
100,000 to 500,000	13.6	13.5	11.1	9.9	7.8	7.0
Over 500,000	13.6	13.5	11.2	10.0	7.9	7.0
WAGES AND SALARY EXPENSE						
Less than 20,000	21.4	20.0	19.1	18.5	17.7	17.9
20,000 to 100,000	21.9	21.8	21.1	20.4	19.2	19.1
100,000 to 500,000	21.4	21.4	21.0	20.8	19.6	19.0
Over 500,000	21.6	21.5	20.9	20.6	19.4	19.0

HOW WAGE *and* SALARY EXPENSE VARIES in 50 RETAIL TRADES

MEASURES OF TYPICAL LABOR EXPENSE RECORDED IN THE
FIFTH DUN & BRADSTREET SURVEY OF RETAIL OPERATING COSTS

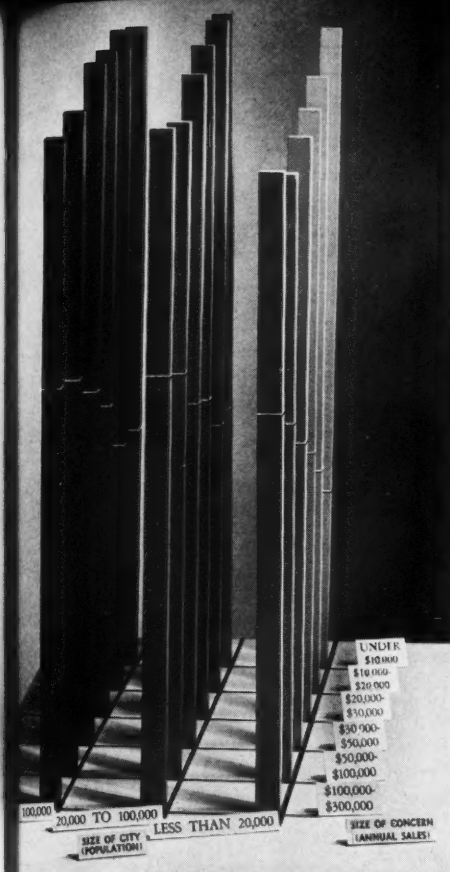
A RETAILER may operate as an owner or tenant, for cash or on credit, in a large town or small one, in a huge establishment or a small shop, yet the labor bite taken out of his sales dollar is bigger than that of any other item of expense. Whether the margin in his trade is characteristically wide or narrow, labor cost consumes about half of that margin. Obviously, then, control of this largest cost item is more than half the battle of expense control and is important in determining whether there will be a profit or a loss and indeed whether the business will survive. These are among the conclusions possible from a study of the latest DUN & BRADSTREET Survey of Retailers' Operating Costs.

Inasmuch as the retailer performs a needed service which supposedly entitles him to a profit, it is significant that many of his tribe entirely miss the profits boat. Business mortality rates in his field are particularly high. There is no rule of thumb by which a new concern can take up its abode definitely on the favorable side rather than the red side of the ledger. Since each contender must determine by experience whether he is a winner or a loser, the largest expense item in the retailing budget deserves consideration from every possible angle.

The survey results have two distinct and different uses: first, analysis of the health or ailments of a specific retail enterprise; second, background facts

about the problems of retailing—in this instance, the labor cost. The difference between these two is the distinction between a doctor's effort to diagnose his patient's illness and the medical research worker's effort to discover the nature of a disease. The health of a specific store can best be examined by comparison with the survey in that trade. The present discussion is of the second class—observations on the basic nature of retail labor costs—derived by cross-sectioning the survey results in 50 trades.

Numerous questions come to the fore. Which trades, in proportion to net sales, have the largest wage and salary bills? What proportion of the gross margin of profit is eaten up by



TYPICAL LABOR COST RATIOS OF RETAILING
BY SIZE OF CONCERN AND SIZE OF TOWN

The lower section of the columns portray wages; upper section, salaries—both in percentages of net sales. Total labor cost tends to decrease slightly with increasing size of store, but grow with size of town. Employees' wages are a larger part of the total in big stores.

labor costs? Do profitable firms spend more or less for labor and management than the ones which are "behind the eight ball?" Do large establishments customarily spend greater proportions of income on labor requirements than small ones? Are the wage and salary expenses of concerns in small towns significantly different from those of similar enterprises in large cities?

The total labor expense of stores in various trades—owners' salaries plus wages of employees—is presented as a percentage of net sales (table II, column 3). Here the alignment is strictly in sequence from highest-cost to lowest-cost trades. In the 50 trades surveyed, the claims upon the sales dollar range from 44 per cent down to 8.5 per cent. The median is close to 18 per cent.

The labor cost represented by a one hundred dollar suit from a custom tailor's shop is four times as great as the labor cost of retailing a hundred dollars worth of groceries (table II). Yet the suit is a single purchase which can be carried away under one arm, while the groceries represent a month's shopping for a normal family and weigh several hundred pounds.

These wide variations in the labor costs of various trades are as basic and necessary as the difference between a draft horse and a saddle horse. They reflect both the amount and quality of

labor required by each type of retailing.

A direct and revealing contrast is that between bakeries and grocery stores. Both sell food, but the baker processes as well as handles the goods. His typical labor cost, 32 per cent of sales, is about three times as large as that of the grocer.

High Expense

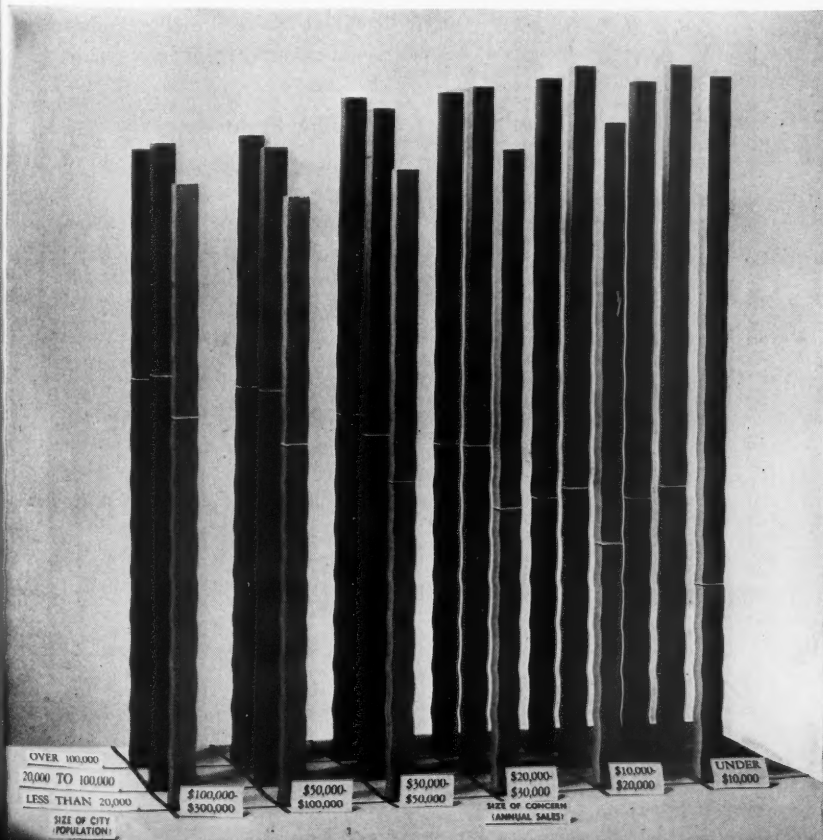
The trades with the highest combined wage and salary expense, measured by percentage of net sales, are custom tailors, monument concerns, florists and nurseries, bakery shops, and garages. Each of these trades performs some manufacturing or service operation in addition to the usual retailing function. Indeed, the customers of these trades primarily seek highly skilled labor and efficient service.

Other trades which are saddled with large outlays for total expenses of labor and management are radio, jewelry, furs, restaurants, house furnishings, office equipment, floor coverings, musical instruments, household appliances, and furniture—all of which handle merchandise of relatively high unit cost. In some of these trades the time consumed by a sales person in closing a deal may be unusually long. Purchasers normally do not buy on the spur of the moment, but take time to look around—to make sure that the article under consideration, which may be chosen "but once in a life time," will provide long-term satisfaction. The need for skilled sales and service personnel results in a high percentage cost in wages and salaries.

Then too, several of these trades use installment selling which adds to labor cost, especially bookkeeping cost. The additions to sales volume obtained in this way are substantial.* Furthermore, the practice usually results in a good rate of profit despite the added expense of records and collections.

Operations in many of these trades which experience high expenses for labor also open up new fields for ser-

* "How Expenses and Profits Vary with Retail Credit Policies," DUN'S REVIEW, November, 1940, page 26.



vice and repair follow-up. Radio inspection and repair service, fur repairs and storage, refrigerator and washing machine service all leave their marks upon the labor cost.

At the other extreme in the array (table II, bottom of column 3) are the trades with the lowest outlays for combined wages and salaries. They are the various types of food stores, country general stores, and establishments selling farmers' supplies, farm implements, motor vehicles, and gasoline. Most of

them handle standardized, low-priced merchandise. Automobiles and farm implements are not low-priced, but they are admirably standardized.

All of the goods sold by group of trades at the bottom of table II are well known—most of them nationally advertised—and customers who know what they want can be served quickly at little expense for labor. These trades normally sell a larger volume per employee than is possible in durable consumer goods lines.

The survey results emphasize an old rule of thumb that combined wages and salaries in retailing commonly absorb more than half of the gross margin; the proportion ranges from 49 to 70 per cent, depending on the trade. Nine in the array of 50 retail trades expend on labor more than 60 per cent of the gross margin of profit. Only 4 devote less than 50 per cent to this purpose, and 37 are within the narrow range of the fifties. The median for the 50 trades, in large stores and small, and in rural communities as well as in all sizes of cities, is 56 per cent (table II, column 4).

Labor cost eats voraciously into the gross margin when much work is to be done or when other expenses are nominal as in these nine trades in which labor costs absorb three-fifths or more of the gross margin: custom tailors, garages, radio stores, house furnishings, floor coverings, filling stations, hardware and farm implements, grocery stores, and grocery stores with filling stations.

The first five are among those trades previously described as having a heavy labor bill, relative to sales volume—because of manufacturing, processing, or service activities. The last four are among the trades at the opposite end of the list (table II), where immediate consumption needs and rural customers are served at low labor cost relative to sales. In none of the intermediate trades (items 13 to 39 of table II) does labor cost consume as large a part of the gross margin.

The Profit Angle

The survey presents convincing evidence that control of labor cost is a determining factor in profits. In all but one of the 46 trades where direct comparison is possible the profitable stores report a lower typical labor cost ratio than the losers (table IV). This is not merely the result of modest salary demands by owners. In the profitable stores a slightly smaller percentage of each sales dollar is withdrawn, but in almost every trade the profitable outlets average a larger sales volume. So the

II. WAGE AND SALARY EXPENSES IN 50 RETAIL TRADES, 1939

TRADES	TYPICAL RATIOS				TYPICAL ANNUAL AMOUNTS	
	Salaries of Owners and Officers	Wages of Other Employees	Salaries and Wages Combined		Sales	Wages and Salaries
	Per Cent of Net Sales	Per Cent of Net Sales	Per Cent of Net Sales	Per Cent of Gross Margin	Dollars	Dollars
Custom Tailors	17.3	26.8	44.1	69.8	15,000	6,615
Monument Concerns	16.0	17.7	33.7	54.3	16,300	5,493
Florists and Nurseries	15.4	16.9	32.3	55.3	15,700	5,071
Bakery Shops	11.0	20.9	31.9	59.1	29,900	9,538
Garages	14.9	15.9	30.8	63.0	16,800	5,174
Radio Stores	19.8	10.0	29.8	67.0	8,600	2,563
Jewelry Stores	17.0	10.4	27.4	56.0	17,550	4,809
Fur Shops	14.4	10.5	24.9	49.6	25,400	6,325
Restaurants	8.3	16.3	24.6	56.9	20,500	5,043
House Furnishings	12.5	11.3	23.8	60.4	24,700	5,879
Office Equipment	10.4	13.3	23.7	56.8	165,000	39,105
Floor Coverings	12.6	10.0	22.6	61.1	25,800	5,831
Musical Instruments	12.4	10.2	22.6	56.9	19,650	4,441
Gifts, Novelties, and Souvenirs	15.4	6.1	21.5	50.8	8,900	1,914
Electric and Gas Household Appl.	10.1	10.7	20.8	58.9	24,400	5,075
Dairy and Poultry Products	8.6	12.1	20.7	52.8	37,500	7,763
Furniture and Undertaking	12.2	8.4	20.6	48.9	25,200	5,191
Paint, Wallpaper, and Glass	11.8	8.2	20.0	57.3	18,700	3,740
Book Stores	9.7	10.2	19.9	56.2	30,500	6,070
Drinking Places	10.8	9.0	19.8	54.5	17,700	3,505
Lingerie, Hosiery, Millinery, etc.	12.6	6.8	19.4	54.2	8,600	1,668
Furniture Stores	8.9	9.8	18.7	49.1	37,700	7,050
Confectionery	12.0	6.6	18.6	55.0	11,200	2,083
Stationery	10.1	7.9	18.0	55.2	25,200	4,536
Automobile Accessories	8.8	9.1	17.9	52.2	24,900	4,457
Men's Furnishings	11.3	6.4	17.7	51.8	20,900	3,699
Shoe Stores	10.4	7.3	17.7	53.8	22,000	3,894
Sporting Goods	10.5	7.2	17.7	53.3	26,100	4,620
Drug Stores	9.6	7.8	17.4	57.0	21,500	3,741
Coal and Other Fuel	8.4	8.6	17.0	56.5	33,000	5,610
Hardware and Furniture	9.2	7.5	16.7	55.9	31,200	5,210
Limited-Price Variety	9.4	7.2	16.6	53.0	17,400	2,888
Hardware Stores	8.9	7.6	16.5	56.7	24,300	4,010
Women's Ready-to-Wear	9.2	7.0	16.2	53.1	20,000	3,240
Men's Clothing	9.6	6.5	16.1	50.6	29,150	4,693
Family Clothing	8.4	6.9	15.3	50.0	27,800	4,253
Alcoholic Beverages	9.8	5.4	15.2	56.7	28,100	4,271
Dry Goods, General Merchandise	8.2	6.7	14.9	53.0	26,100	3,880
Lumber and Building Materials	6.5	8.2	14.7	54.7	59,800	8,791
Filling Stations	8.8	5.8	14.6	60.1	18,700	2,730
Meat Markets	7.8	6.2	14.0	59.6	29,800	4,172
Cigar Stores	9.2	4.8	14.0	58.6	15,000	2,100
Hardware and Farm Implements	6.5	6.2	12.7	62.3	44,100	5,601
Farm Implements	6.2	5.4	11.6	58.9	48,600	5,638
Grocery and Meat Stores	5.7	5.6	11.3	58.9	31,400	3,548
Grocery Stores	7.0	4.2	11.2	62.6	21,300	2,386
Groceries with Filling Stations	7.9	2.7	10.6	67.1	17,150	1,818
Country General Stores	6.2	4.2	10.4	58.1	19,550	2,033
Motor Vehicle Dealers	2.5	6.5	9.0	52.6	136,500	12,285
Farmers' Supply Stores	4.2	4.3	8.5	48.6	59,000	5,015

III. WAGE AND SALARY EXPENSES OF LARGE AND SMALL RETAILERS BY SIZE OF CITY—31 TRADES, 1939

(Wage and salary expenses appear as percentages of net sales)

TRADES	EMPLOYEE WAGE RATIOS						OWNERS' SALARY RATIOS					
	ANNUAL SALES VOLUME						ANNUAL SALES VOLUME					
	Under \$10,000	\$10,000- \$20,000	\$20,000- \$30,000	\$30,000- \$50,000	\$50,000- \$100,000	\$100,000- \$300,000	Under \$10,000	\$10,000- \$20,000	\$20,000- \$30,000	\$30,000- \$50,000	\$50,000- \$100,000	\$100,000- \$300,000
FOOD, BEVERAGE, AND RESTAURANT GROUP												
BAKERY SHOPS												
Less than 20,000 . . .	←18.3→		←20.8→				←13.7→		←9.9→			
Over 100,000	←19.1→		←21.0→				←13.6→		←9.6→			
CONFECTIONERY												
Less than 20,000 . . .	6.1	9.6	6.6				13.7	12.1	9.2			
Over 100,000	←5.7→						←12.1→					
DRINKING PLACES, TAVERNS												
Less than 20,000 . . .	←8.5→		←11.0→				←11.5→		←9.4→			
20,000 to 100,000 . . .	←8.9→						←15.7→					
Over 100,000	←8.8→		←11.8→				←11.8→		←9.6→			
GROCERY STORES												
Less than 20,000 . . .	1.8	1.7	4.5	4.6	5.3		9.1	8.3	7.5	5.0	3.4	
20,000 to 100,000 . . .	←5.4→		←5.2→				←7.9→		←5.1→			
100,000 to 500,000 . . .	←1.2→		←5.4→				←8.6→		←5.2→			
Over 500,000	←3.7→		←3.5→				←7.8→		←6.4→			
GROCERY AND MEAT STORES												
Less than 20,000 . . .	3.1	3.5	4.0	5.2	6.6	7.3	8.0	7.5	6.3	5.4	4.3	2.2
20,000 to 100,000 . . .	3.9	3.6	5.3	5.9	7.0	9.6	8.2	7.6	6.5	5.7	4.5	2.6
Over 100,000	2.4	3.9	4.5	6.5	7.4	9.9	9.0	7.1	7.1	5.5	4.3	3.0
GROCERY STORES WITH FILLING STATIONS												
Less than 20,000 . . .	1.7	2.4	4.1	←3.5→			10.7	7.8	5.7	←4.9→		
20,000 to 100,000 . . .			3.3						6.1			
Over 100,000			←3.0→						←10.9→			
MEAT MARKETS												
Less than 20,000 . . .		←3.7→		←6.9→				←8.6→		←6.9→		
Over 100,000		←4.3→		←7.9→				←9.5→		←5.8→		
RESTAURANTS, EATING PLACES												
Less than 20,000 . . .	9.6	14.4	←15.3→	←18.1→			12.1	9.6	←7.3→	←4.9→		
20,000 to 100,000 . . .	←16.3→		←18.3→				←9.0→		←7.8→			
Over 100,000	←17.5→		←19.6→	←26.0→			←10.6→		←7.8→	←5.2→		
GENERAL MERCHANDISE AND FARMERS' SUPPLY GROUP												
COUNTRY GENERAL STORES												
Less than 20,000 . . .	2.8	3.0	3.8	4.6	5.9	8.0	8.7	7.1	6.2	5.3	4.3	3.1
DRY GOODS AND GENERAL MERCHANDISE												
Less than 20,000 . . .	1.6	5.7	5.8	6.3	8.1	11.5	11.8	10.2	8.0	7.1	5.9	4.8
20,000 to 100,000 . . .	←4.8→		←6.2→	←10.8→			←10.2→		←8.3→	←4.1→		
Over 100,000	←4.3→		←5.7→	←9.7→			←13.7→		←9.2→	←6.0→		
FARM IMPLEMENT DEALERS												
Less than 20,000 . . .		2.8	7.1	5.4	5.6			10.5	7.4	6.0	4.2	
20,000 to 100,000 . . .			←6.0→						←6.1→			
Over 100,000			←6.0→						←6.1→			
FARMERS' SUPPLY STORES												
Less than 20,000 . . .	←6.0→		2.5	4.2	4.5	4.0	←8.0→		6.5	5.2	3.3	2.3
20,000 to 100,000 . . .	←3.3→		←2.5→	←4.9→			←7.8→				←2.9→	
LIMITED-PRICE VARIETY												
Less than 20,000 . . .	4.4	6.3	7.7	9.0	10.2		13.2	10.2	7.8	6.4	4.2	
20,000 to 100,000 . . .			←6.0→						←10.9→			
Over 100,000			←8.6→						←9.9→			
APPAREL GROUP												
FAMILY CLOTHING												
Less than 20,000 . . .	1.2	4.7	6.4	6.9	←8.0→		11.5	10.5	8.7	7.7	←6.0→	
20,000 to 100,000 . . .			←7.1→	←9.3→					←7.4→	←6.4→		
Over 100,000	←2.0→		←7.5→	←7.5→			←9.6→		←8.3→	←5.5→		
MEN'S AND BOYS' CLOTHING												
Less than 20,000 . . .	5.7	4.1	5.1	6.8	←8.0→		14.6	11.1	10.6	7.4	←7.9→	
20,000 to 100,000 . . .	←4.5→		←5.9→	←8.6→			←11.8→		←10.7→	←6.5→		
Over 100,000	←3.7→		←7.9→	←11.0→			←11.6→		←9.1→	←6.1→		
SHOE STORES												
Less than 20,000 . . .	2.6	5.2	6.6	4.8	←8.1→		16.1	12.6	9.5	10.0	←8.1→	
20,000 to 100,000 . . .	←4.6→		←8.9→	←11.8→			←13.2→		←8.9→	←6.4→		
Over 100,000	←6.6→		←7.2→	←9.2→			←13.5→		←10.2→	←6.8→		

III. WAGE AND SALARY EXPENSES OF LARGE AND SMALL RETAILERS BY SIZE OF CITY—31 TRADES, 1939—(Continued)

(Wage and salary expenses appear as percentages of net sales)

TRADES	EMPLOYEE WAGE RATIOS						OWNERS' SALARY RATIOS					
	ANNUAL SALES VOLUME						ANNUAL SALES VOLUME					
	Under \$10,000	\$10,000- \$20,000	\$20,000- \$30,000	\$30,000- \$50,000	\$50,000- \$100,000	\$100,000- \$300,000	Under \$10,000	\$10,000- \$20,000	\$20,000- \$30,000	\$30,000- \$50,000	\$50,000- \$100,000	\$100,000- \$300,000
WOMEN'S READY-TO-WEAR												
Less than 20,000	3.0	6.0	5.9	7.6	8.7	11.0	9.6	8.4	7.1	6.4		
20,000 to 100,000 . . .	7.4			8.7		10.9			8.2			
Over 100,000	7.0		8.3		10.2	11.5		8.9		5.8		
AUTOMOTIVE GROUP												
AUTO ACCESSORIES, PARTS												
Less than 20,000	6.5	7.8	6.2	6.5	10.6	15.6	9.3	8.4	7.0	5.6		
20,000 to 100,000 . . .	13.2			13.0		9.7			6.0			
Over 100,000	10.2			12.8		11.1			7.4			
FILLING STATIONS												
Less than 20,000	3.5	4.4	6.0	7.4	7.8	11.9	9.6	8.3	7.0	4.6	3.6	
20,000 to 100,000 . . .	5.7	6.2	7.4	12.0		10.4	8.4	7.0	4.0			
Over 100,000	5.0	5.5	5.0	8.4	9.7	10.6	10.1	8.4	7.1	5.0		
GARAGES												
Less than 20,000	14.1	11.8	12.0	10.3		22.5	15.5	10.7	6.2			
20,000 to 100,000 . . .	19.6		28.9			17.9		9.8				
Over 100,000	16.1		26.4			23.0		8.3				
MOTOR VEHICLE DEALERS												
Less than 20,000		7.1		5.7	5.9		5.1		3.2	2.2		
20,000 to 100,000 . . .		7.1		6.0	6.2		5.1			1.8		
Over 100,000		7.1		8.0	7.0		5.1		3.8	1.9		
FURNITURE AND HOUSEHOLD GROUP												
ELECTRIC AND GAS HOUSEHOLD APPLIANCES												
Less than 20,000	6.2	8.6	9.8	13.1	14.7	17.9	12.2	9.4	6.7	4.7		
20,000 to 100,000 . . .	12.1		12.1	13.4	14.1	12.3		10.7	9.0	5.8		
Over 100,000	10.8		8.1	8.4	12.2	14.2		11.6	7.9	6.8		
FURNITURE STORES												
Less than 20,000	6.0	6.1	8.0	9.6	11.2	16.7	12.1	10.6	8.5	6.0	5.4	
20,000 to 100,000 . . .	8.5		8.1	12.1	13.1	12.8			8.3	6.8	6.0	
Over 100,000	8.7		10.2	11.8	12.1	12.8			9.2	7.2	7.2	
BUILDING MATERIALS AND HARDWARE GROUP												
HARDWARE STORES												
Less than 20,000	3.4	6.0	6.8	8.3	9.4	14.4	10.0	9.1	7.3	5.6		
20,000 to 100,000 . . .	8.5		9.8		9.1	12.9		9.2		6.6		
Over 100,000	5.4		9.2		9.4	15.1		9.5		5.7		
PAINT, WALLPAPER, GLASS												
Less than 20,000	6.1		6.5			14.6		9.6				
20,000 to 100,000 . . .	10.0		9.8			14.6		7.2				
Over 100,000	11.6		10.2			14.8		9.2				
HARDWARE, FARM IMPLEMENTS												
Less than 20,000	3.1		5.5		7.0	10.0		7.1		4.8		
LUMBER, BUILDING MATERIALS												
Less than 20,000	7.5	4.6	5.9	7.2	7.9	13.2	10.0	9.1	7.6	6.0	4.7	
20,000 to 100,000 . . .	9.7			10.9	8.6	8.9			6.8	4.9		
Over 100,000	9.2			9.4	9.7	8.3			6.5	4.5		
ALL OTHER RETAIL STORES												
COAL AND OTHER FUEL												
Less than 20,000	8.4		8.5	7.5	8.7	10.6		9.4	7.8	7.3		
20,000 to 100,000 . . .	9.6			10.1		8.9				5.2		
Over 100,000	9.8			8.6		10.2				3.9		
DRUG STORES												
Less than 20,000	2.7	6.2	7.9	9.2	10.5	16.6	11.5	8.9	8.2	7.1		
20,000 to 100,000 . . .	5.2		8.2	9.0		12.6		9.7	7.2			
Over 100,000	4.7		9.5	10.6		13.3		9.1	7.3			
JEWELRY STORES												
Less than 20,000	7.7	8.2	10.4			24.0	17.4	14.0				
20,000 to 100,000 . . .	6.5		13.1	13.2		23.9		12.4		9.4		
Over 100,000	11.2		13.2	12.0		20.6		12.6		9.5		
STATIONERY STORES												
Less than 20,000	6.7			10.7		11.8			8.0			
20,000 to 100,000 . . .	6.0			11.0		11.4			7.8			
Over 100,000	3.9			11.6		14.1			8.4			

dollar earnings of their owners may compare quite favorably.

The significant item from the profit viewpoint is the employee wage bill. The right amount of help, neither too good for their jobs nor incompetent, would seem to be the ideal—which is perhaps so obvious that the statement seems trite. Yet many retailers fail to achieve that goal.

Measured by the usual standards of employment and compensation, the retailer who operates unprofitably may actually pay no more to his help than is paid for like work by his prosperous competitor. It is clear from the results of the survey, however, that he gets less for his money. This may be inevitable under the prevailing circumstances, or it may be chargeable to poor manage-

ment. If management holds the answer to the question, the cause of the fault could spring from any number of practices or policies.

Occasionally, the wage ratio may not tell the whole story. For instance, the realized mark-up in a cut-price establishment may be inadequate to cover the usual wage cost in that trade. The alternative remedies are a higher marking or a lower grade of help—which means more dependence on price to sell the goods. Cut-price merchandising is most dangerous when done unconsciously. In a store where this situation prevails, the clerk could still be working harder and selling more units of merchandise than a worker in a profitable store of the same type, and receive less pay for the amount of work done. Yet his wage expense would constitute a larger proportion of the proprietor's net sales dollar.

Even where margin is in line with trade averages, the alternative remedies are similar—more sales volume or less wage bill.

In conclusion, the losing retailer is likely to be paying a cent and one-half more of his sales dollar to his employees than his profitable competitor. And he himself probably draws more heavily on that same sales dollar to the extent of a cent and one-half. Together these two differences amount to three cents on the dollar.

Large vs. Small Stores

Large scale retailing yields no such spectacular labor savings as modern business has come to expect from mass production methods in manufacturing. Looked at in a fatherly way the survey results suggest that there is enough advantage to encourage the retailer to build up his enterprise, yet not enough to prevent retailing from remaining the natural stronghold of "small business." The typical small retailer's combined salary and wage expense ratio is about one-seventh heavier than that of his large competitor.

Very obviously the composition of the total labor cost changes with size

IV. RELATION OF PROFITABLE OPERATION TO WAGE AND SALARY EXPENSES IN 50 RETAIL TRADES, 1939

(Salary and wage expenses appear as percentages of net sales)

TRADES	SALARIES OF OWNERS AND OFFICERS		WAGES OF OTHER EMPLOYEES		SALARIES AND WAGES COMBINED	
	Profitable Concerns	Un-profitable Concerns	Profitable Concerns	Un-profitable Concerns	Profitable Concerns	Un-profitable Concerns
Custom Tailors	17.3	..	24.5	..	41.8	..
Monument Concerns	16.3	16.0	17.7	21.2	34.0	37.2
Florists and Nurseries	16.0	15.3	16.4	20.7	32.4	36.0
Bakery Shops	10.6	13.4	20.3	23.4	30.9	36.8
Garages	14.2	15.0	15.0	16.1	29.2	31.1
Radio Stores	16.5	21.9	8.8	11.5	25.3	33.4
Jewelry Stores	15.7	19.2	9.7	13.2	25.4	32.4
Fur Shops	13.2	..	9.5	..	22.7	..
Restaurants	8.0	10.0	16.7	16.0	24.7	26.0
House Furnishings	11.2	14.0	10.9	11.3	22.1	25.3
Office Equipment	10.2	10.4	12.5	15.9	22.7	26.3
Floor Coverings	10.7	..	10.0	..	20.7	..
Musical Instruments	11.9	15.0	10.2	12.7	22.1	27.7
Gifts, Novelties, and Souvenirs ..	14.7	17.5	5.4	12.3	20.1	29.8
Electric and Gas Household Appl.	9.5	10.5	9.7	13.0	19.2	23.5
Dairy and Poultry Products	9.0	..	12.1	..	21.1	..
Furniture and Undertaking	11.6	13.3	8.3	9.3	19.9	22.6
Paint, Wallpaper, and Glass	11.3	13.8	8.1	9.5	19.4	23.3
Book Stores	10.4	9.2	9.4	11.7	19.8	20.9
Drinking Places	10.8	11.0	8.9	9.1	19.7	20.1
Lingerie, Hosiery, Millinery, etc.	12.0	13.4	6.9	6.8	18.9	20.2
Furniture Stores	8.2	10.7	9.3	12.2	17.5	22.9
Confectionery	10.2	13.5	7.8	4.3	18.0	17.8
Stationery	9.9	10.6	7.1	9.5	17.0	20.1
Automobile Accessories	8.5	9.0	8.8	10.3	17.3	19.3
Men's Furnishings	11.2	11.9	6.2	8.0	17.4	19.9
Shoe Stores	10.1	10.5	6.6	8.6	16.7	19.1
Sporting Goods	9.5	11.7	6.0	7.9	15.5	19.6
Drug Stores	9.4	10.6	7.4	8.9	16.8	19.5
Coal and Other Fuel	8.1	9.3	8.2	9.8	16.3	19.1
Hardware and Furniture	9.0	9.4	7.2	9.2	16.2	18.6
Limited-Price Variety	9.2	9.9	7.0	9.8	16.2	19.7
Hardware Stores	8.3	10.6	7.1	8.4	15.4	19.0
Women's Ready-to-Wear	9.3	9.1	6.5	7.9	15.8	17.0
Men's Clothing	9.0	10.9	6.1	7.6	15.1	18.5
Family Clothing	8.0	8.9	6.7	7.2	14.7	16.1
Alcoholic Beverages	9.6	13.5	5.2	6.5	14.8	20.0
Dry Goods, General Merchandise	8.0	8.7	6.0	8.4	14.0	17.1
Lumber and Building Materials	6.0	7.5	7.7	9.7	13.7	17.2
Filling Stations	8.5	9.2	5.5	7.0	14.0	16.2
Meat Markets	7.1	8.3	6.2	5.8	13.3	14.1
Cigar Stores	8.3	11.6	4.8	5.1	13.1	16.7
Hardware and Farm Implements	6.0	7.0	5.5	8.6	11.5	15.6
Farm Implements	6.0	6.2	5.3	5.7	11.3	11.9
Grocery and Meat Stores	5.5	6.1	5.4	5.7	10.9	11.8
Grocery Stores	6.1	7.9	4.1	4.3	10.2	12.2
Groceries with Filling Stations ..	7.6	10.4	2.8	1.7	10.4	12.1
Country General Stores	6.0	6.6	4.0	4.7	10.0	11.3
Motor Vehicle Dealers	2.2	3.0	6.3	6.5	8.5	9.5
Farmers' Supply Stores	4.0	4.7	4.0	5.0	8.0	9.7
Number of Profitable Concerns with Lower Expense Ratio	42		41		45	
Number of Profitable Concerns with Higher Expense Ratio	4		5		1	

of store. At one extreme the proprietor of a very small store does all the work and has no employee wage bill to report. What he draws as salary or what he could fairly and properly draw,* is mixed compensation for his labor and for his management ability.

At the opposite extreme, the general management problems may consume the entire working time of the proprietor or manager of a large store. He may even delegate all buying. His personal labor on the sales floor would be a useless drop in the bucket.

In between these two extremes it is impractical to determine—and probably academic to worry about the proportion of proprietors' or officers' salaries which pays for labor and the proportion which pays for management. The survey questionnaire did not ask retailers to make any such distinction.

At some ill-defined point in the growth of any retail enterprise its guiding genius becomes more manager than clerk. Some disasters in retailing undoubtedly result from a premature conviction on that point, with retirement to a swivel chair when a little foot work would be more productive.

However, the survey results do show how employee wages absorb a larger part of sales as a store grows; and how owners' and officers' salaries shrink in percentage terms, even though continuing to grow in dollars. Table I and the three-dimensional chart tell the percentage story; while table II gives the dollar picture. A typical motor vehicle dealer's salary expense is \$3,412 but only absorbs 2.5 per cent of the sales because the usual unit in that trade is large. Yet the proprietor of a typical confectionery shop living modestly on \$1,344 per year, is drawing 12.0 per cent of his limited sales volume.

Without attempting to determine where management function becomes more important than personal labor in retailing, the survey figures show clearly

* Many reporting retailers pay themselves no regular salary but draw against profits as needed. In such instances a typical owner's salary for that size of concern was deducted from profits and added to expenses before computing the ratios. This adjustment threw into the losing class some concerns which originally reported a small profit.

ly the point in retail growth when payroll becomes a greater worry to the proprietor than his own salary—at least when it becomes bigger in dollars. The sales volume level at which this happens is by no means the same in every trade. Below this point incompetent direction of his employee's time and effort means at worst, a diminution of the proprietor's salary and profit income. Beyond this point, bad management and excess wage costs can more quickly wipe out his return—or conversely, good management attains a leverage for increasing earnings.

At the \$30,000 annual volume level in the retail drug trade, the wage will ordinarily begin to exceed the salary item. The equivalent level in a grocery and meat store is \$50,000; in a tavern or bar, \$20,000 (table III).

City vs. Small Town

Labor cost is a somewhat larger item in city retailing than it is for the small town store keeper. Higher living costs in cities are undoubtedly a factor, for the survey results show that the employees draw larger percentage of sales in the cities, and the proprietors do so too—when they can. For instance, in small establishments with an annual net sales volume of less than \$10,000, the wage expense increases from about 6 per cent in towns of less than 20,000 population to 8 per cent in cities of over 500,000. Moreover, retailers doing a yearly business of \$100,000 to \$300,000 paid wages amounting to around 11 per cent of the sales dollar in the small

towns and 12 per cent in the largest communities (table III, read down).

The survey averages nominate the city retailer of less than \$10,000 volume as the "forgotten man" of retailing. He draws less salary than his confrere running the same size of store in a country town where rent and food doubtless cost less. For a store in the \$10,000—\$20,000 class, or any larger size, however, owners' salaries also expand slightly with the growth in size of the town.

Labor expenses are found in the 1940 survey to raise problems of varying intensity for all retailers. Although like other expenses in that they are necessary, their magnitude classes them above all others. They take, on an average, 17 per cent of the net sales dollar, but in some trades go up to 44 per cent. On the gross margin, they claim from 70 per cent in some trades down to 49 per cent as a minimum. They absorb about 12.5 per cent more of the net sales dollar of the unprofitable than of the profitable retailer. The small store pays out around 20 per cent more of the sales dollar as labor expense than does the large store in the same size of town.

And all of the time, of course, it should be remembered that almost all of the contrasts which have been called to attention and the conclusions drawn from them are based upon a broad cross-section of retail wage and salary costs in 50 trades. The individual retailer should be measured by his own trade's standard ratios.

THIS fifth report from the Survey of Retail Operating Costs examines wage and salary ratios according to the retailers' profitability, gross margin, volume of sales, and size of town. Compilations and interpretation of data were prepared in the Research and Statistical Division by Alfred R. Oxenfeldt under the direction of Walter Mitchell, Jr.

Four earlier studies (DUN'S REVIEW, October, November, 1940, January, February, 1941) reported on profits, credit policies, advertising costs, and occupancy costs. A limited supply of reprints is available. For each trade there has been published a folder containing all tabulations; order blanks for these have been sent users of the DUN & BRADSTREET services.



SYNTHETIC, RUBBER-LIKE MATERIAL RECENTLY PLACED ON PRIORITIES LIST—PHOTOGRAPH FROM DU PONT

BUSINESS DIARY

February - 1941						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

EVENT OF THE MONTH

Office of Production Management applies priorities; U. S. defense contracts mount to \$12,000,000,000 and national debt limit is raised to \$65,000,000,000.

- 3 U. S. SUPREME COURT upholds Wage-Hour law. Also rules that disputes between labor unions do not come under Sherman Anti-Trust Act.
- 4 GERMANY barter locomotives for 17,640 tons of Turkey's hazel nuts.
- 6 FIRST regional conference of River Plate closes after adopting conventions, recommendations, and resolutions to produce economic benefits for Argentina, Bolivia, Brazil, Paraguay, and Uruguay.
- 8 A PATENT has been granted for making artificial wool fibers from peanut meal. . . . Inventors in Germany receive patent on new way to cast type from synthetic resins.
- 12 OPM PRIORITIES DIVISION asks magnesium producers to allocate entire stocks to defense industries; urges non-defense aluminum users to substitute plastics. . . . Standard Oil Company of New Jersey reports a fluid catalyst process for making gasoline—output 10 octane numbers higher and yield one-third to one-half more than that from thermal cracking units.
- 15 AN inventor in Toyko has received a patent on a bacterial process for making oil with properties of natural petroleum from sewage sludge and garbage. Another patent recently granted covers a method for changing crude petroleum to a gas for piping to refineries.
- 17 GERMANY obtains controlling interest in shares of Bor Copper Mines, Yugoslavia, largest copper producing property in Europe. . . . Price Stabilization Division of National Defense Advisory Commission sets by order a limit on prices of used machine tools. . . . Total of Government defense contracts passes \$12,000,-

DURING THE MONTH

Economic co-operation planned by nations of River Plate, South America. . . British increase gold holdings. . . Nazi occupation of Roumania, Bulgaria.

- 000,000. . . . U. S. Supreme Court upholds power of Iowa to collect 2 per cent use tax on property which its residents purchase by mail from out-of-State sales agencies.
- 19 PRESIDENT ROOSEVELT signs bill increasing national debt limit to \$65,000,000,000. . . . Canadian geophysicist says weeds concentrate rare metals from soil, one, the Common Horsetail, holding 4½ ozs. of gold per ton.
- 20 U. S. TREASURY ends Federal tax exemption on future security issues; plans issuance after March 1 of \$200,000,000 a week in 91-day notes. . . . Dairy farmers in New York milk shed vote 99.41 per cent for a revision of Federal-State milk marketing price order. . . . The ugli, a combination grapefruit, orange, and tangerine, comes to New York from Jamaica, W. I.
- 21 UNITED STATES and Mexican Departments of Agriculture agree on intensive scientific experiments aimed at making Mexico a major rubber producing area.
- 24 OPM INVOKES mandatory, industry-wide priorities on producers of machine tools and aluminum. . . . U. S. Department of Agriculture reports Chinese rice crop is 364,000,000 bushels below average.
- 27 ITALY bills Spain 7,500,000,000 lire (current quotation 5.05 cents) for aid given to Franco during Spanish Civil War. . . . Reconstruction Finance Corporation underbids banking syndicate to provide a net interest cost of 3.20 per cent on tax-exempt highway refunding bonds of Arkansas. . . . Bank of England increases gold holdings for sixth successive week.
- 28 BULGARIA announces she will sign the Three Power Pact of Germany, Italy, and Japan.

THE REGIONAL TRADE BAROMETERS

Trends in consumer purchasing in the 29 barometer regions are summarized on page 31. Charts on this page and the three following left-hand pages compare the index for each region with the index for the United States since 1939. The accompanying paragraphs give more recent detail about regional trade conditions.

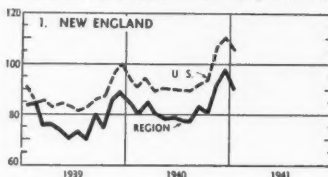
Charts of the indexes since January 1929, appeared in the March 1941, number and will be published again in September. Additional information about the barometers and about their especial usefulness in regional sales quota work, back figures and data on regional boundaries are available for users of the indexes.

1. NEW ENGLAND

JAN., 91.1 DEC., 98.1 JAN. 1940, 85.6

JANUARY—Percentage department store sales increases from previous January: Providence 4, Boston 0, New Haven 7. FEBRUARY—Percentage retail trade increases over previous February: Boston 3, Providence 6, New Haven 20, Portland-New Bedford 10, Manchester 9, Worcester 1, Springfield 5. Wholesale trade increases: Portland-Boston 5, Springfield 7. Payrolls and production well above last year. Heavy industries and woolen mills continue at capacity; cotton textiles near capacity with backlogs large. Shoe activity approaching seasonal peak. Collections fair to good. MARCH—Shoe output at seasonal peak, above 1940. Retail sales up 5 to 10% over last year.

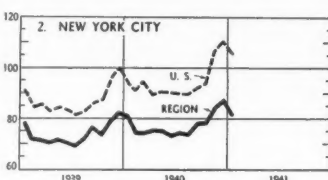
CORRECTED FOR SEASONAL VARIATION; 1928-32=100



2. NEW YORK CITY

JAN., 82.1 DEC., 87.7 JAN. 1940, 81.1

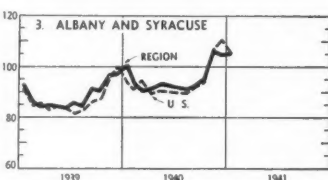
JANUARY—Percentage department store sales increases from previous January: New York and Brooklyn 6, Bridgeport 12, Westchester-Stamford 5. FEBRUARY—Percentage retail trade increases over previous February: Bridgeport 15, New York City department store sales 7, hotel sales 6. Manufacturers of knit goods report sales volume greatest since 1937. Dress, coat, and suit sales above last year. Output of electric motors, abrasives, hardware, and plumbing supplies at capacity. Large expansion program in plastics industry. Collections satisfactory. MARCH—Department store sales drop below last year as late Easter and bus strike affect trade comparisons.



3. ALBANY AND SYRACUSE

JAN., 105.8 DEC., 105.3 JAN. 1940, 100.1

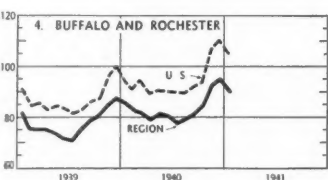
JANUARY—Percentage department store sales increases over previous January: Syracuse 12, Northern State 18, Central State 14. FEBRUARY—Percentage retail trade increases over previous February: Albany 12, Binghamton-Syracuse 13, Utica 10. Wholesale trade increases: Albany 10, Syracuse 1. Payrolls and production better than last year. Employment expanded in business machines, clothing and firearms industries. Binghamton shoe factories at capacity. Heavy industries active; unfilled orders substantial. Production at brush factories and breweries off seasonally. Collections fair to good. MARCH—Business machine plants operating full time. Syracuse bank clearings 33% above previous year.



4. BUFFALO AND ROCHESTER

JAN., 91.1 DEC., 95.1 JAN. 1940, 86.1

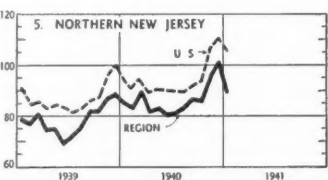
JANUARY—Percentage department store sales increases from previous January: Buffalo +16, Rochester +5, Niagara Falls —2. FEBRUARY—Percentage retail trade increases over previous February: Buffalo 10, Elmira-Rochester 5. Buffalo wholesale trade up 8%. Farm income above a year ago. Payrolls and production better than last year, steady to above last month. Defense stimulating metals and machinery firms in Buffalo area. Employment gains in furniture, shoes, and clothing lines. Collections steady to above a year ago. MARCH—Retail trade holds year-to-year increase. Buffalo department store sales averaging 10 to 20% above a year ago; steel production at 105% of capacity.



5. NORTHERN NEW JERSEY

JAN., 89.7 DEC., 100.8 JAN. 1940, 85.1

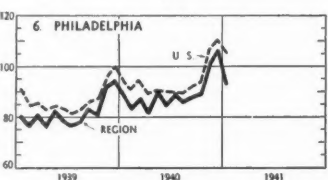
JANUARY—Percentage department store sales increases over previous January: Northern New Jersey 4, Newark 3. FEBRUARY—Newark retail trade 17% above a year ago, wholesale trade up 4%. Payrolls and production up compared with last year, steady with previous month. Aircraft concerns with large defense orders caused increase in employment. Bank clearings 10% above a year ago for Northern New Jersey as a whole; up 12% in Newark alone. Collections better than a year ago in all divisions. MARCH—Newark retail sales up 3% from last year, below previous month. Wholesalers' and manufacturers' sales above a year ago.



6. PHILADELPHIA

JAN., 93.5 DEC., 106.3 JAN. 1940, 89.5

JANUARY—Percentage department store sales increases over previous January: Trenton 6, Philadelphia 7, Harrisburg 16, Wilmington 7. FEBRUARY—Percentage retail trade gains from previous February: Trenton-Reading 10, Allentown-Wilmington 12, Philadelphia 13, Wilkes-Barre 2, Harrisburg 5; Scranton off 2. Philadelphia wholesale trade 18% above 1940. Payrolls and production above last year. Durable goods industries particularly active; substantial pick-up in output of consumers' goods, especially textiles. Collections fair to good. MARCH—Philadelphia retail volume advanced during month, slightly above last year.

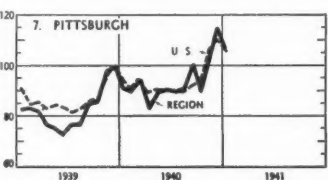


7. PITTSBURGH

JAN., 107.5 DEC., 115.2 JAN. 1940, 92.0

JANUARY—Percentage department store sales changes over previous January: Erie +13, Pittsburgh-Youngstown +5, Wheeling —3, West Virginia State +10. FEBRUARY—Percentage retail trade increases over previous February: Erie 8, Pittsburgh 7, Youngstown 6, Charlestown 15.

(Continued directly opposite)



Wholesale trade increases over last February: Erie 12, Pittsburgh 13, Charleston 0. Payrolls and production above last year. Steel operations at full capacity, employment much increased over last year. Engineering equipment and machine tool factories very active. Over \$5,000,000 contract awarded for propeller plant at Beaver. Collections good. MARCH—Pittsburgh retail sales moderately above a year ago.



DEFENSE WORKER—PHOTOGRAPH BY H. ARMSTRONG ROBERTS

THE TREND OF BUSINESS

PRODUCTION . . . PRICES . . . TRADE . . . FINANCE

Business grows steadily more active under the impact of the defense program. The pressure on industry to expand is undiminished; bottlenecks of materials and labor and in some lines limitations of plant capacity keep output under the record-high level of demand. Prices continue upward at a moderately accelerated pace. Consumer income and expenditures are highest since the 1929-1930 peak and still rising.

THE broad advance of business activity has swept production and employment on to new record levels. Compared with one year ago at this time total industrial output shows an expansion of approximately 25 per cent, non-agricultural employment an increase of 7 per cent, or 2,200,000 persons.

Through the widening trade stream the current of defense spending runs strong. Expenditures for defense are now at the rate of \$750,000,000 monthly, compared with less than \$150,000,000 in this period a year ago. Contracts for defense work awarded since June 1 total over \$12,500,000,000.

Consumers' spending and production of consumers' goods have continued to

move upward despite the heavy demands of the armament program. At a new all-time high in the first quarter of the year were sales and production of automobiles, manufacturers' unit output of refrigerators, ranges, radios.

In a number of respects, however, the intensified defense effort has already required the modification of business-as-usual procedure. The fixing of maximum prices on second-hand machine tools, aluminum, zinc, scrap iron, and bituminous coal, a detailed system of priorities for a broadening group of articles, the establishment of a super-agency for strike mediation, are among recent actions taken to insure an uninterrupted flow of defense materials.

The change-over to substitutes for strategic metals has already proceeded beyond the experimental stage in a number of peace-time industries.

Reports from wholesale and retail markets indicate that the pressure on productive facilities has been substantially increased by consumers' efforts to cover ahead on requirements. Latest figures show no slackening of the forward covering movement; manufacturers' inventories, continuing the upward trend started in October 1939, stood at a new peak at the end of February, 15 per cent larger than a year ago. More moderate increases occurred in trade holdings: wholesalers' inventories on the same date were no more than 6 per cent above last year, department store stocks up only 3 per cent. Business borrowing from banks increased steadily through March, at the end of the month amounted to over \$1,000,000,000 greater than in March 1940.

The rising tendency in commodity prices gained momentum during March and the general level of prices started April at a new war-time high. Reversing the downtrend of the first two months of 1941, stock prices recovered moderately in March but failed to regain positions at the start of the year; in contrast to the sharp gain in business volume, the accelerated rise in wholesale prices, higher earnings and dividend disbursements, stock prices stood well below levels of last Spring.

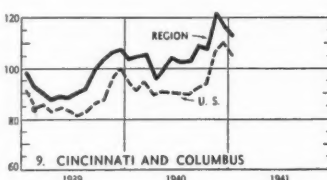
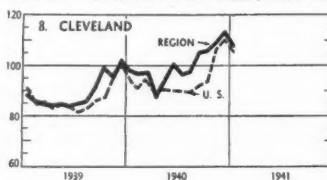
Industrial activity: Increases of a more than seasonal nature were registered for industrial output during February and March despite the less than seasonal gain in lines already operating at capacity limits. The FRB adjusted index of production, which advanced from 139 in January to 141 in February (1935-1939 = 100) is estimated to have moved ahead 2 more points in March.

Steel operations averaged approximately 96 per cent of capacity in January and February, advanced to 99 per cent in March. Ships under construction as of March 1 totalled 1,732-

8. CLEVELAND

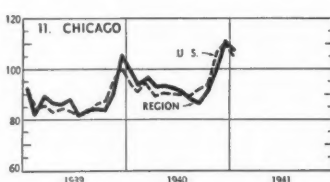
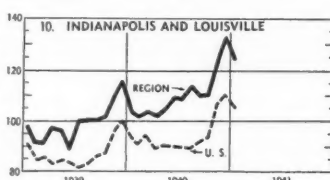
JAN., 108.4 DEC., 113.4 JAN. 1940, 98.5
 JANUARY—Percentage department store sales increases over previous January: Cleveland 9, Akron 16, Canton 17, Toledo 6. FEBRUARY—Percentage retail trade increases over previous February: Cleveland 12, Akron 19, Toledo 10. Wholesale trade increases: Cleveland 20, Akron 2, Toledo 5. Payrolls and production higher than last year. Cleveland employment at all-time high. Steel plants operating at 90% of capacity; machine tools at capacity. Expansion in aircraft parts industries continues. Plastics output increasing rapidly. Collections better than a year ago. MARCH—Cleveland steel rate at all-time high. Department store sales in Cleveland, Akron, and Toledo above 1940 level.

CORRECTED FOR SEASONAL VARIATION: 1928-32=100



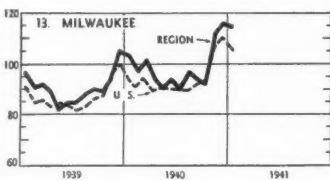
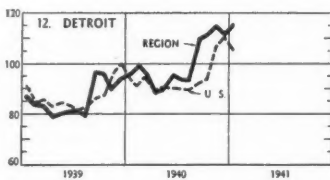
10. INDIANAPOLIS AND LOUISVILLE

JAN., 125.2 DEC., 131.8 JAN. 1940, 104.0
 JANUARY—Percentage department store sales increases over previous January: Louisville 38, Indianapolis 16, Fort Wayne 24. FEBRUARY—Percentage retail trade increases over previous February: Louisville 13, Indianapolis 12, Evansville-Terre Haute-Fort Wayne 5. Wholesale trade increases: Louisville 13, Indianapolis 10. Farm prices generally good. Payrolls and production above last year. Furniture output 15 to 20% above 1940. Fort Wayne airport and aircraft plant under construction. Trade from Fort Knox stimulates Louisville business. Collections vary, generally fair. MARCH—Indianapolis retail sales 5% below last year. Employment and payrolls substantially ahead of 1940.



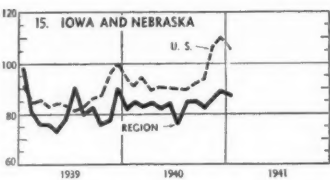
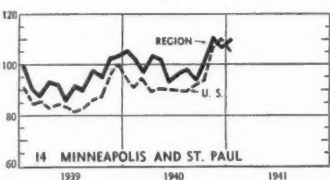
12. DETROIT

JAN., 115.4 DEC., 111.5 JAN. 1940, 96.3
 JANUARY—Percentage department store sales changes from previous January: Detroit +17, Grand Rapids -2. FEBRUARY—Percentage retail trade increases over previous February: Detroit 11, Grand Rapids 12, Saginaw 10. Wholesale trade increases: Detroit 8, Grand Rapids 10. Greenhouse gardeners report ready market at satisfactory prices. Payrolls and production higher than a year ago. Automobile manufacture well above last year, contra-seasonally active. Metal trade operating at capacity. Furniture manufacture shows increased volume. Collections fair to good. MARCH—Detroit retail trade gained 7 to 12% over 1940. Automobile output well above last year.



14. MINNEAPOLIS AND ST. PAUL

JAN., 110.1 DEC., 107.5 JAN. 1940, 106.0
 JANUARY—Minneapolis-St. Paul-Duluth-Superior department store sales up 5% from last January. FEBRUARY—Percentage retail trade increases from last February: Minneapolis 3, Duluth 15, St. Paul 8, Butte 12; Great Falls off 5. Wholesale trade changes: Minneapolis +5, Duluth -5, Great Falls -5. Payrolls and production steady to above a year ago. Production of lead, silver, zinc mines 20% above last year; Butte copper mines running three shifts. Work on machinery and clothing defense orders at high level. Building in Billings at all-time high. Collections generally fair. MARCH—Retail sales active; St. Paul volume 12% above last year.

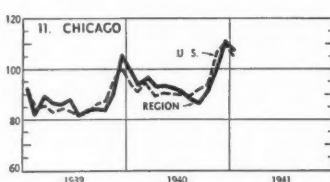


9. CINCINNATI AND COLUMBUS

JAN., 113.1 DEC., 116.8 JAN. 1940, 103.8
 JANUARY—Percentage department store sales increases over previous January: Cincinnati 11, Columbus 1. FEBRUARY—Percentage retail trade increases over previous February: Cincinnati-Zanesville 10, Columbus-Springfield 15, Dayton 16, Lexington 5. Wholesale trade increases: Cincinnati 15, Columbus 20. Tobacco marketing season ended, prices lower than last year. Dairy and poultry production steady; prices fluctuate. Payrolls and production generally ahead of last year. Machine tool plants operating at capacity with increased employment. Collections generally good. MARCH—Cincinnati bank clearings over 20% above a year ago. Retailing generally steady.

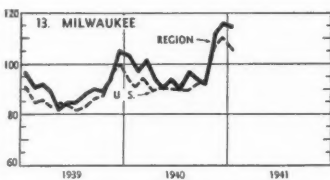
11. CHICAGO

JAN., 108.0 DEC., 110.9 JAN. 1940, 99.6
 JANUARY—Percentage department store sales increases over previous January: Chicago 6, Peoria 16. FEBRUARY—Percentage retail trade gains from previous February: Chicago 2, Rockford 5, Peoria 7, South Bend 16; Springfield off 3. Chicago wholesale trade up 5% from last year. Livestock and grain prices firm, wheat below a year ago. Payrolls and production higher than last year. Machine tool activity causes increased employment and difficulties in obtaining skilled labor. Large defense contracts awarded in this area. Chicago building continues active. Collections vary in different sections. MARCH—Chicago department store sales slightly above a year ago; bank clearings up 20%.



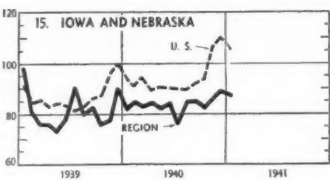
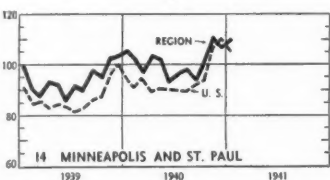
13. MILWAUKEE

JAN., 114.9 DEC., 116.0 JAN. 1940, 103.8
 JANUARY—Milwaukee department store sales 12% above last January. FEBRUARY—Percentage retail trade increases over previous February: Milwaukee 8, Green Bay 1. Milwaukee wholesale trade 5% above a year ago. Payrolls and production above last year and last month. Machine tools and heavy machinery industry operating at capacity against large backlogs, skilled labor shortages appeared. Green Bay paper mill output steady with last year. Five-week strike in large machine plant affects 7,000 workers. Collections steady to better than a year ago. MARCH—Machine strike continues. Milwaukee department store sales about 20% above a year ago.



15. IOWA AND NEBRASKA

JAN., 87.7 DEC., 89.4 JAN. 1940, 82.6
 JANUARY—Omaha department store sales 5% above last January. FEBRUARY—Percentage retail trade increases from previous February: Burlington 20, Cedar Rapids-Waterloo 6, Davenport 10, Dubuque-Lincoln 0, Des Moines 5, Sioux City 8, Omaha 13. Wholesale trade increases over last February: Sioux City 8, Des Moines 5, Omaha 10. Soil conditions good for Spring planting, farm prices up in month. Payrolls and production steady to above last year. Defense sub-contracts stimulate activity in foundries and storage tank manufacturing; Dubuque sash and door mills at full time operations. Collections generally fair. MARCH—Des Moines bank clearings 26% ahead of last year.



728 gross tons compared with 1,598,628 at the start of the year. Cotton spinning activity increased from 112 per cent of capacity in January to 115 per cent in February. Automobile schedules jumped to 510,000 units in February, held close to this record in March.

There were some indications in these latest reports that new productive facilities were now playing a part in speeding output. In the aircraft industry the increase in productive floor space between January 1 and March 1 was 28 per cent. For all industries the value of new plant construction and of new equipment went to an all-time high for the first quarter (estimate, U. S. Department of Commerce), representing an annual rate of \$3,500,000,000, against \$2,300,000,000 in 1939, and \$3,200,000,000 at the previous peak in 1920.

Nevertheless, expansion of production and productive facilities still lagged behind the rate of industrial ordering and backlogs of unfilled business were further enlarged. For February the NICB index of manufacturers' orders stood at the unprecedented level of 231 (1935-1939 = 100); this was twice as high as its position a year ago.

Consumer income: Factory employment increased by approximately the usual seasonal amount in February. Payrolls were up more sharply than employment and helped to raise the adjusted index of income payments to a new high since early 1930. Total non-agricultural income of \$5,550,000,000 was 8.7 per cent above the 1940 level (U. S. Department of Commerce), while cash farm income totalled \$629,000,000, or a decrease of 2.2 per cent compared with a year ago (U. S. Department of Agriculture).

The creeping advance in living costs continued in the latest month but increases remained of moderate proportions. Cost of living indexes of the U. S. Department of Labor and NICB agreed in showing the gain over last year between 1 and 2 per cent.

Industrial Production

Federal Reserve Board Adjusted Index
1935-1939 = 100

	1938	1939	1940	1941
January	86	102	122	139
February	84	101	116	141
March	84	101	113	
April	82	97	111	
May	80	97	111	
June	81	102	121	
July	86	104	121	
August	90	104	121	
September	92	113	125	
October	95	121	129	
November	100	124	132	
December	101	126	138	

Factory Payrolls

U. S. B. L. S. Index*
1923-1925 = 100

	1938	1939	1940	1941
January	75.4	84.7	99.8	120.7
February	77.7	87.1	99.3	126.4
March	77.8	88.3	99.8	
April	75.2	86.8	97.9	
May	73.6	86.3	97.8	
June	71.6	87.9	99.2	
July	71.7	85.8	98.2	
August	77.9	91.2	105.5	
September	82.3	97.4	111.6	
October	85.0	103.2	116.2	
November	85.3	103.2	116.5	
December	88.1	105.4	122.8	

* Revised January 1941.

Department Store Sales

Federal Reserve Board Adjusted Index
1923-1925 = 100

	1938	1939	1940	1941
January	90	88	92	101
February	88	88	90	102
March	86	88	89	
April	83	88	89	
May	80	87	89	
June	82	86	91	
July	83	87	92	
August	83	88	98	
September	85	90	97	
October	86	92	94	
November	87	93	100	
December	88	95	101	

Wholesale Commodity Prices

U. S. B. L. S. Index—1926 = 100

	Dec. 1940	Jan. 1941	Feb. 1941	Mar. 1941
I	79.8	80.2	80.6	80.5
II	79.7	80.2	80.5	80.6
III	79.7	80.6	80.5	80.9
IV	79.9	80.8	80.4	81.6
V				

Industrial Stock Prices

Dow-Jones Index (Weekly Average)

	Dec. 1940	Jan. 1941	Feb. 1941	Mar. 1941
I	130.67	131.43	125.85	122.10
II	131.90	133.22	123.87	121.17
III	129.60	131.07	120.82	123.14
IV	129.19	128.65	119.27	123.15
V				

Consumer buying: Enlarged consumer income continued to make itself felt in a better than seasonal expansion in trade. Adjusted indexes of rural sales and of department and variety store trade advanced in February and registered increases over last year of between 10 and 14 per cent. The DUN'S REVIEW index of consumer spending reached 107 (1928-1932 = 100), marking a gain of 17 per cent compared with a year ago (see pages 31 and 33).

Foreign trade: Merchandise exports showed a decline in February to \$303,413,000 from \$325,413,000 in January and \$347,106,000 last February. This was the smallest monthly figure since last November. Imports increased by a small amount, rising to \$233,702,000, compared with \$228,671,000 in January and \$200,068,000 in February.

Prices: A steady upswing during March raised the USBLS general wholesale price index over 1 point to 81.6 (1926 = 100). This was the most sustained advance so far in 1941 and brought the index to the highest level in over three years.

Stock prices also showed an upward tendency in March but the total change was relatively insignificant. The (Dow-Jones) industrial stock price average of 123.15 for the fourth week contrasted with a high earlier this year of 133.22, with a peak near the start of the war of 154.17.

Banking and finance: Most striking of the financial trends was the continued rise in bank loans for industrial, commercial, and agricultural purposes. From the first week of January through the week of March 26, loans of member banks in 101 cities increased by \$400,000,000 to a total of \$5,420,000,000.

Financing through capital markets still failed to share significantly in the heavier demand for funds. Corporate issues declined further in February. A total of \$265,962,000 was moderately above a year ago but issues for new capital amounted only to \$31,550,000.

16. ST. LOUIS

JAN., 106.1 DEC., 108.2 JAN. 1940, 93.4
JANUARY—Percentage department store sales increases from previous January: St. Louis 12, Springfield 50, Quincy 16. FEBRUARY—Percentage retail trade increases over previous February: St. Louis 10, Springfield 6. St. Louis wholesale trade 10% above a year ago. Payrolls and production above a year ago. Steel output stepped up to 93% of capacity. Retail trade stimulated by large consumer demand resulting from defense expenditures. Increased activity in St. Louis lumber mills and woodworking plants. Shoe industry reports gains over last year. Collections fair. MARCH—St. Louis shoe output reached seasonal peak; department store sales 4 to 6% below last year.

18. MARYLAND AND VIRGINIA

JAN., 126.2 DEC., 131.9 JAN. 1940, 104.9
JANUARY—Percentage department store sales increases over previous January: Baltimore 13, Washington 21, Richmond 16, Virginia State 22. FEBRUARY—Percentage retail trade increases over previous February: Baltimore 13, Washington 9, Norfolk 25, Richmond 6, Roanoke 8. Wholesale trade increases: Baltimore 10, Norfolk 20, Richmond 5. Weather favorable for farm work; truck crops good. Payrolls and production above last year. Construction, lumber mills, brickyards, and textiles activity greatly increased over 1940. Shipyards working full time. Collections fair to good. MARCH—Baltimore retail sales off 5% from last year. Industrial activity at high level.

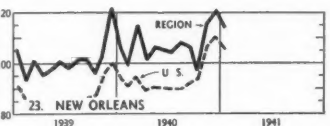
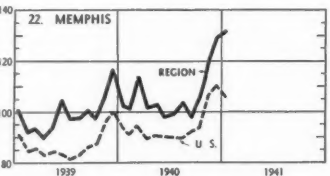
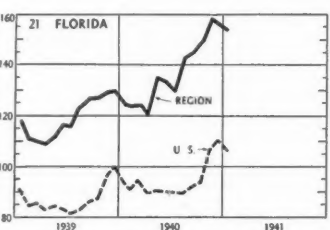
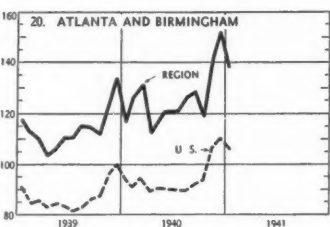
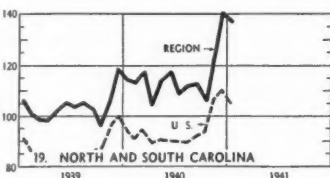
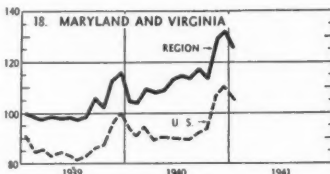
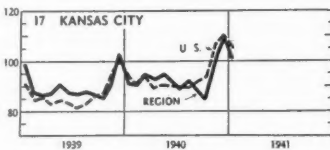
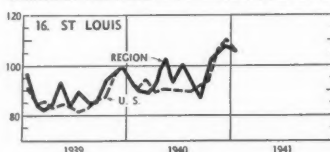
20. ATLANTA AND BIRMINGHAM

JAN., 138.4 DEC., 153.0 JAN. 1940, 116.3
JANUARY—Percentage department store sales increases over previous January: Atlanta 19, Birmingham-Chattanooga 17, Montgomery 6, Knoxville 21, Nashville 28. FEBRUARY—Percentage retail trade increases over previous February: Atlanta 11, Augusta-Birmingham-Mobile-Chattanooga-Nashville 5, Savannah 25, Knoxville 15. Wholesale trade increases: Atlanta 5, Birmingham 10, Nashville 2. Payrolls and production above last year. Textile mills continue full time operation. Brick and building materials industries active. Labor shortages in building trades and farm work. Collections fair to good. MARCH—Atlanta department store sales 3 to 5% above last year. Wholesale orders well ahead of 1940.

22. MEMPHIS

JAN., 132.3 DEC., 128.9 JAN. 1940, 102.3
JANUARY—Percentage department store sales increases over previous January: Memphis 23, Fort Smith 15, Little Rock 35. FEBRUARY—Percentage retail trade increases over previous February: Memphis 10, Fort Smith 8, Little Rock 5. Memphis wholesale trade 10% above last year. Spinach yield good, prices satisfactory. Payrolls and production steady to above a year ago. Furniture manufacturers' sales strong. Army camp at Little Rock stimulates retail trade. Collections steady with a year ago. MARCH—Employment increasing, wages trending higher. Memphis retail trade 5% ahead of last year; continued activity in home building.

CORRECTED FOR SEASONAL VARIATION; 1928-32=100



17. KANSAS CITY

JAN., 101.1 DEC., 109.8 JAN. 1940, 91.2
JANUARY—Percentage department store sales increase over previous January: Kansas City 14, Wichita 12, Oklahoma City 20, Tulsa 29. FEBRUARY—Percentage retail trade increases over previous February: Kansas City 12, Wichita-Oklahoma City 8, Tulsa 6. Wholesale trade increases: Kansas City 10, Oklahoma City 8. Moisture conditions for wheat best in several years. Payrolls and production generally ahead of last year. Aircraft factories received additional defense contracts. Flour milling and meat packing continued at a good rate. Collections fair to good. MARCH—Kansas City retail sales showed volume gains over previous year; department store sales up about 5%.

19. NORTH AND SOUTH CAROLINA

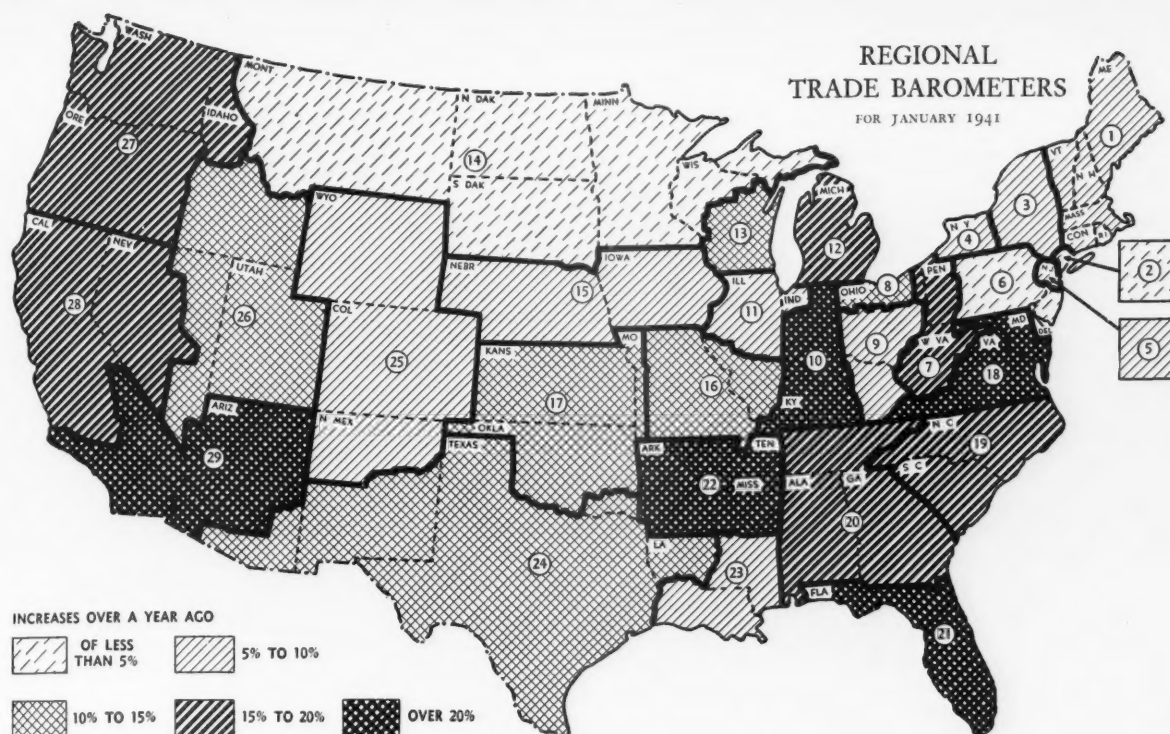
JAN., 137.3 DEC., 140.5 JAN. 1940, 114.7
JANUARY—Percentage department store sales increases over previous January: North Carolina 22, South Carolina 19. FEBRUARY—Percentage retail trade changes from previous February: Asheville —10, Winston-Salem-Charlotte-Raleigh +5, Wilmington +12, Charleston +26, Columbia +20, Greenville +15. Wholesale trade increases: Wilmington 7, Charleston 10, Winston-Salem 14. Payrolls and production generally above last year. Textile mills working overtime. Charleston Navy Yard continues on 24-hour schedule. Building trades stimulated by defense contracts. Collections fair to good. MARCH—New textile plants in North Carolina. Charleston bank clearings up 15%.

21. FLORIDA

JAN., 152.9 DEC., 156.4 JAN. 1940, 125.2
JANUARY—Percentage department store sales increases over previous January: Jacksonville 24, Tampa 25. FEBRUARY—Percentage retail trade increases over previous February: Jacksonville 11, Miami 10, Tampa 12. Wholesale trade increases: Jacksonville 12, Tampa 8. Favorable growing conditions in citrus areas during February caused increase in production over last season. Payrolls and production steady to above a year ago. Cigar manufacturing continues active in Jacksonville. Sawmill and lumber production up from last month but prices and sales decreased. Collections fair. MARCH—Early March frost damaged growing crop reducing shipments of tender vegetables.

23. NEW ORLEANS

JAN., 112.7 DEC., 120.8 JAN. 1940, 106.5
JANUARY—Percentage department store sales changes from previous January: New Orleans —1, Jackson +10. FEBRUARY—Percentage retail trade increases over previous February: New Orleans 5, Jackson 18. Wholesale volume in New Orleans 10% above a year ago. Defense project payrolls and army cantonments in this area accelerate sales of building materials and buying generally. Payrolls and production steady to above last year. Shipbuilding and defense construction stimulating employment and industrial activity. Collections fair. MARCH—Retail furniture sales in New Orleans show gain over 1940; bank clearings up 15% above a year ago.



TRADE GAINS BETTER THAN SEASONAL

The United States Trade Barometer rose to 107.1 (preliminary) in February from 105.5 in January. Barometer figures are compiled by Dr. L. D. H. Weld, Director of Research, McCann-Erickson, Inc.; trade information is reported by branch offices of DUN & BRADSTREET, INC.

CONSUMER buying expanded beyond seasonal expectations in February, stimulated by the continued rise in payrolls and employment. The seasonally adjusted trade barometer for the United States advanced to 107.1 in February from 105.5 in the previous month as spending held at the most generous rate for the period since 1930.

Retail trade gains over the previous year, which widened in January and again in February, narrowed in March. Inclement weather made inroads into volume and comparisons with 1940 included the climax of Easter buying last year, when the holiday came three weeks earlier. Rain, snow, and roaring winds in different sections of the country caused reports to vary considerably. In most instances sales volume was considered satisfactory and merchants were cheered by the week-to-week improvement. An important factor was the sustained interest in home furnishings and automobiles. Apparel sales, affected by the slow Spring,

lagged until the final week of March when warmer weather acted as a Spring tonic and volume in many cities soared to the highest weekly totals since Christmas. Seasonal lines such as farm and gardening implements, cleaning items, and sports equipment also provoked wider interest.

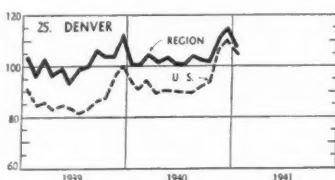
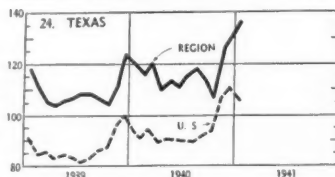
The broader trade gains in February which carried the index 17 per cent above last year stemmed chiefly from larger unit turnover and shoppers' tendency to buy better merchandise, according to merchants, although retail prices were also moderately higher. Response to furniture promotions was termed excellent, with sales about 20 per cent higher than last year. A prolonged spell of cold weather aided in clearing shelves of Winter goods.

Largest regional gains in consumer buying as compared with last year came from the South during February and March, with outstanding increases also chalked up consistently in the Middle West.

24. TEXAS

JAN., 136.9 DEC., 130.6 JAN. 1940, 121.0
 JANUARY—Percentage department store sales increases over previous January: Dallas 10, Fort Worth 25, Houston 11, San Antonio 19. FEBRUARY—Percentage retail trade increases over previous February: Dallas 10, Fort Worth 20, El Paso 18, Houston 3, San Antonio 15. Wholesale trade increases: Dallas 10, Houston 2. Continued rains delayed Spring planting but ranges and Winter crops are in good condition. Payrolls and production above last year. Building supply trades and lumber manufacturing continue very active. Defense orders totalling \$91,000,000 have been placed in Dallas. Collections fair to good. MARCH—Dallas retail sales above last year's level. Wholesale markets strong.

CORRECTED FOR SEASONAL VARIATION: 1920-32=100

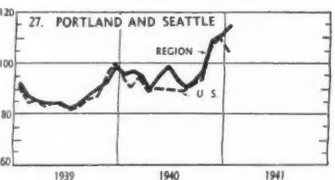
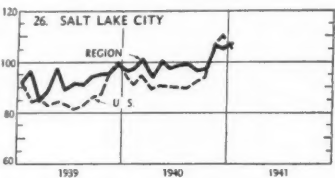


25. DENVER

JAN., 107.8 DEC., 115.0 JAN. 1940, 100.3
 JANUARY—Denver department store sales 8% ahead of same month last year. FEBRUARY—Percentage retail trade increases over previous February: Denver 11, Albuquerque 5. Denver wholesale trade 6% above last February level. Crop prospects good due to ample moisture. Payrolls and production above last year. Large government contracts provide increased employment. Steel mills operating at a good rate. Mining supply companies active; faced with difficulty in obtaining heavy machinery and steel. Collections fair to good. MARCH—Retail trade slightly above last year. Construction of \$13,000,000 arms plant begun in Denver.

26. SALT LAKE CITY

JAN., 108.0 DEC., 106.0 JAN. 1940, 96.8
 JANUARY—Salt Lake City department store sales 18% above previous January level. FEBRUARY—Salt Lake City retail sales 14% above last February. Wholesale trade 9% above last December. Crop prices remain low. Grain conditions good. Production and payrolls above a year ago. Many shops and factories increasingly active on defense contracts. Bank clearings in Salt Lake City 6% above last February. Boise bank clearings 7% above same month a year ago. Wholesale collections better than a year ago, retail collections steady with same month last year. MARCH—Salt Lake City department store sales 13% above 1940; bank clearings gain 20%.

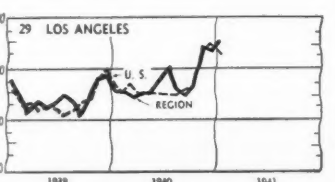
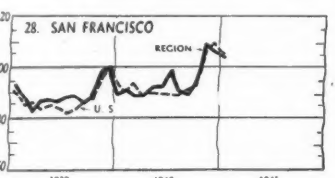


27. PORTLAND AND SEATTLE

JAN., 114.6 DEC., 111.3 JAN. 1940, 96.3
 JANUARY—Percentage department store sales increases over previous January: Seattle 18, Tacoma 38, Spokane 10, Portland 14. FEBRUARY—Percentage retail trade increases over previous February: Seattle-Portland 12, Tacoma 20, Spokane 5. Wholesale trade increases: Seattle 9, Portland 10. Mild weather benefited Winter wheat and other crops. Livestock prices above last year. Payrolls and production steady to above last year. Lumber manufacturing activity accelerated by defense orders and early Spring building; backlogs of unfilled orders large, inventories low. Collections fair to good. MARCH—Portland retail volume 10 to 15% above last year.

28. SAN FRANCISCO

JAN., 99.0 DEC., 107.3 JAN. 1940, 90.0
 JANUARY—Percentage department store sales increases over previous January: San Francisco 14, Oakland 7. FEBRUARY—Percentage retail trade changes from previous February: San Francisco +12, Oakland +15, Sacramento 0, Fresno -8. San Francisco wholesale trade 20% above last February. Continuous rains adversely affected Winter and truck garden crops, retarded Spring plowing, retail sales. Payrolls and production steady to above a year ago. Employment increased by defense production and construction in Sacramento army camps. Grape growers and domestic wine industry benefit by decreased imports. Collections fair to good. MARCH—San Francisco department store trade 2% above 1940.



29. LOS ANGELES

JAN., 106.6 DEC., 107.0 JAN. 1940, 91.8
 JANUARY—Percentage department store sales increases over previous January: Los Angeles 12, San Diego 40, Phoenix 21. FEBRUARY—Department store sales were off 2% in Los Angeles from previous February. Retail sales increased in Phoenix and San Diego. Los Angeles wholesale volume 11% above last year. Income from orange crops 42% ahead of last February. Ranges in good condition; livestock prices better than a year ago. Payrolls and production generally above last year. Arizona mine output and employment at good levels. Award of \$18,000,000 contract for construction of Long Beach Naval Base made. Collections good. MARCH—Retail sales retarded by storms; below a year ago in some cities.

TRAILER COLONY FOR DEFENSE WORKERS, BALTIMORE—PHOTOGRAPH BY ACME



Barometers now available for twenty-nine regions indicate that in January the South, Middle West and Pacific Coast led other sections of the country. Trade in nine of the twenty-nine regions topped 1940 volume by 19 per cent or more. Five of these were located in the South, two each in the Middle West and on the Pacific Coast. Not one of the twenty-nine regions failed to make some gain over the like 1940 period. The Memphis region headed the country with a rise of 29 per cent, New York was last with an increase of 1 per cent.

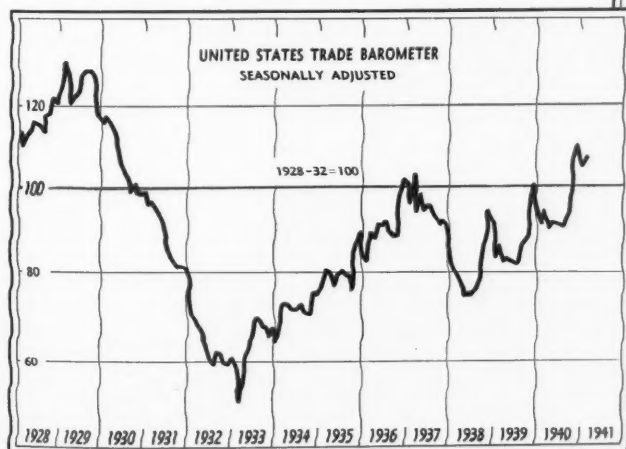
The decline in trade in January from the eleven-year peak volume of December was greater than usual for the entire country and the seasonally adjusted index dropped 4.5 per cent in the month. However, in eight areas—three of which were in the Southwest and two on the Pacific Coast—the indexes registered gains from December. The largest increase—one of 5 per cent—occurred in the Texas district. Other regions were Los Angeles, Portland and Seattle, Memphis, Salt Lake City, Minneapolis and St. Paul, Detroit, and Albany and Syracuse.

(Charts and trade reports for each region begin on page 26)

THE MAP AND CHART compare the January, 1941, indexes with those for the same month a year ago. The column at the extreme right of the chart indicates the relative importance of the regions: the figures are percentages of national retail trade from the 1935 Census of Business.

THE INDEXES for the regions are charted, with U. S., from 1939, on pages 26, 28, 30, 32. They are composites based on bank debits (Federal Reserve Board), department store sales (Federal Reserve Board), new car registrations (R. L. Polk & Company), and life insurance sales (Life Insurance Sales Research Bureau). In regions 2, 3, 4, 5, and 14, wholesale sales (Department of Commerce), and in region 2, advertising linage (*Editor and Publisher*), which made those indexes more accurate, are included. Each index is separately adjusted for seasonal variation and for the number of business days in each month. All are comparable. The average for the five years 1928-1932 equals 100. The preliminary figure for the United States is computed one month before regional figures are available.

THE PARAGRAPHS printed opposite the 29 regional charts quote figures for January based on samples of department and retail stores reporting to Federal Reserve banks; for February and for the first half of March based on opinions and comments of business men in various lines of trade, gathered and weighed by the local DUN & BRADSTREET offices.



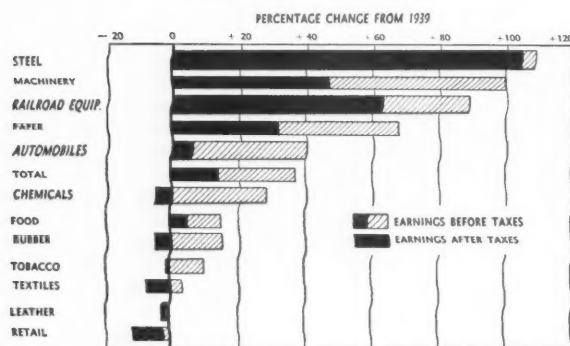
REGIONAL TRADE BAROMETERS

Region	Jan. 1941 Regional Index	Jan 1941 Compared with Jan. 1940 (%)				Retail 1935 Sales %	
		-10	0	+10	+20		+30
U. S.	105.5					+11.2	100.0
1. NEW ENGLAND	91.0					+ 6.3	7.8
2. NEW YORK CITY	82.1					+ 1.2	10.3
3. ALBANY AND SYRACUSE	105.8					+ 5.7	2.5
4. BUFFALO AND ROCHESTER	91.1					+ 5.8	1.9
5. NORTHERN NEW JERSEY	89.7					+ 5.4	2.9
6. PHILADELPHIA	93.5					+ 4.5	6.2
7. PITTSBURGH	107.5					+16.8	3.7
8. CLEVELAND	108.4					+10.1	2.9
9. CINCINNATI AND COLUMBUS	113.1					+ 9.0	3.1
10. INDIANAPOLIS AND LOUISVILLE	125.2					+20.4	2.6
11. CHICAGO	108.0					+ 8.4	6.4
12. DETROIT	115.4					+19.8	4.0
13. MILWAUKEE	114.9					+10.7	2.2
14. MINNEAPOLIS AND ST. PAUL	110.1					+ 3.9	4.5
15. IOWA AND NEBRASKA	87.7					+ 6.2	3.0
16. ST. LOUIS	106.1					+13.6	2.5
17. KANSAS CITY	101.1					+10.9	3.6
18. MARYLAND AND VIRGINIA	126.2					+20.3	3.8
19. NORTH AND SOUTH CAROLINA	137.3					+19.7	2.1
20. ATLANTA AND BIRMINGHAM	138.4					+19.0	3.5
21. FLORIDA	153.7					+22.8	1.3
22. MEMPHIS	132.3					+29.3	1.5
23. NEW ORLEANS	113.6					+ 6.7	1.0
24. TEXAS	136.9					+13.1	4.5
25. DENVER	107.8					+ 7.5	1.3
26. SALT LAKE CITY	108.0					+11.6	.8
27. PORTLAND AND SEATTLE	114.6					+19.0	2.7
28. SAN FRANCISCO	104.2					+15.8	3.4
29. LOS ANGELES	111.4					+21.4	3.9

THROUGH THE STATISTICIAN'S EYES

ODD AND INTERESTING ITEMS FROM THE MONTH'S RECORD

Taxes and Earnings



EARNINGS OF VARIOUS MANUFACTURING GROUPS—1940—National Industrial Conference Board—The 1940 Federal tax bill cut sharply into earnings. Steel, machinery, railroad equipment, and paper industries made the largest profit gains as compared with 1939.

SHARP GAINS in Federal tax payments of industrial concerns were shown in the study made by the National Industrial Conference Board of a sample of 120 industrial companies with aggregate profits of \$699,009,000 in 1940. According to the compilation, total earnings before Federal taxes increased 37 per cent from 1939, but a tax rise of 141 per cent narrowed the gain to 14 per cent.

Steel, machinery, railroad equipment, and paper companies surveyed showed outstanding improvement in net income over 1939. As measured by the percentage of earnings absorbed by taxes, levies weighed most heavily on the machinery, automobile, paper, chemical, and rubber industries, and in the two last-named caused profits after Federal tax deductions to drop below 1939 levels.

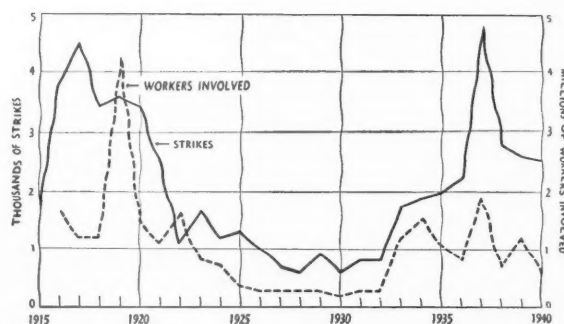
Strikes

HEADLINE NEWS this year has been made by strikes in plants working on defense orders. The War Department estimates that more than 1,000,000 man-days of work were lost on Army contracts in 20 plants from January 1 through March 21, a greater time loss than that sustained from all strikes in the first three months of last year, when man-days idle amounted to 911,000.

Actually, labor disputes in 1940 declined for the third successive year. Strikes called last year numbered 2,450 as counted by the U. S. Bureau of Labor Statistics, a decline of 6 per cent from 1939; 577,000 workers were involved, a decrease of 50 per cent; man-days idle totalled 6,500,000, a drop of 64 per cent. In the latter half of 1940 strike activity

expanded and time lost represented 60 per cent of the yearly total; however it was not until December that strikes and lost time exceeded the 1939 level. Idleness in the machinery and building industries from June through October was two to three times as great as in the earlier months of the year.

It is interesting to see what happened during the last World War, when labor disputes reached a peak surpassed only by the troubled year 1937. Strikes in 1915, the second year of the war, were fairly low but in the first quarter of 1916 the number recorded was 688, as compared with 230 in the like 1915 period. For the year 1916 strikes jumped to 3,789 from 1,593 in 1915. Metal and building trades were the most affected.



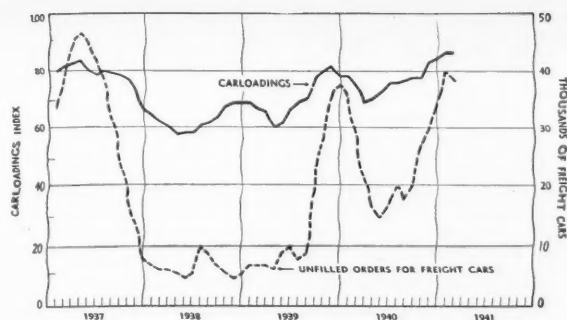
STRIKES IN THE UNITED STATES—1915-1940—U. S. Bureau of Labor Statistics—Labor disputes declined for the third successive year in 1940; December was the first month in which strike activity exceeded 1939.

Railroad Freight Traffic

PURCHASES of new railroad equipment have been expanding steadily in preparation for the enlarged traffic demands expected this year. Unfilled orders for freight cars for Class I railroads reached the highest point since the Summer of 1937 early this year and totalled 37,981 as of March 1, according to the Association of American Railroads.

Responsible for the new purchases is the sustained upward trend in movement of merchandise by rail since March, 1940 and as a consequence the decline in the amount of rolling stock which can be renovated for service, and the smaller surplus of cars available. At the end of last year the Class I roads owned 1,640,000 freight cars; although 65,545 new cars were added in 1940, 41,017 more than in 1939, surplus cars averaged 130,000 monthly during the past year, lowest reserve on record since 1923.

Carloadings in 1941 will increase 9 per cent over last year



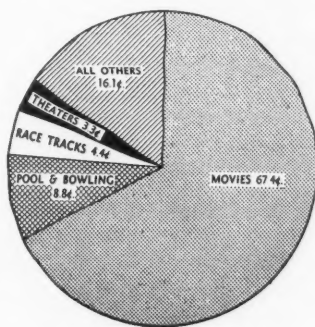
SEASONALLY ADJUSTED INDEX OF FREIGHT CARLOADINGS AND UNFULFILLED ORDERS FOR FREIGHT CARS—1937-1941—Federal Reserve Board and the Association of American Railroads—With the index of freight traffic highest in a decade, unfilled orders for freight cars were pushed up to 1937 levels.

and come within 75 per cent of the peak load handled in 1929, according to estimates of Mr. Ralph Budd, Transportation Commissioner of the National Defense Advisory Commission. In February the Federal Reserve Board's seasonally adjusted index of loadings stood at 86, highest level reached in any month since October, 1930. Actual carloadings during January and February were largest for the months in any year since 1931.

The Amusement Dollar

FIRST HONORS in public entertainment still belong to the Hollywood glamour experts. Motion pictures remained by far the most popular commercial amusement in 1939, reported the U. S. Bureau of the Census in its summary of amusement enterprises.

Although America spent more money on commercial amusements—close to one billion dollars—in 1939, our tastes were essentially the same as in 1935. Movies swallowed 67 cents of the amusement dollar, a slightly smaller portion than the 73 cents taken in 1935. Bowling, billiards, and pool ranked second, biting off 9 cents of that mythical dollar, a larger wedge than the 6 cents in 1935, and evidence of the successful promotion of the modernized bowling alley. Legitimate theaters and horse and dog race tracks about



HOW THE AMUSEMENT DOLLAR IS SPENT—1939—U. S. Bureau of the Census—Movies are the entertainment favorite, taking 67 cents of every amusement dollar.

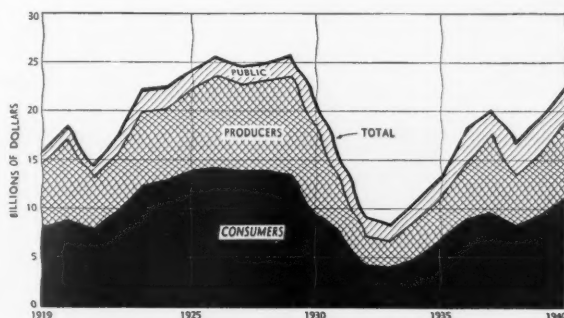
held their own in the competition for public attention, winning 3 cents and 4 cents respectively.

Reflecting more prosperous times, our expenditures of \$998,079,000 represented an increase of 43 per cent from 1935, while the number of enterprises spread to about 45,000 from 37,000 in 1935.

Half of the money spent and one-third of the establishments were concentrated in the five States with the largest population—New York, California, Illinois, Pennsylvania, and Ohio—although not always in order of population rank. California collected more amusement receipts than any other State with the exception of New York, yet ranked fifth in population.

Expenditures for New Durable Goods

TOTAL EXPENDITURES for durable goods in 1940 were the largest since 1929, and surpassed 1939 by 16 per cent. Estimates by Mr. George Terborgh of the Federal Reserve Board put expenditures at \$22,123,000,000 last year, as compared with \$19,021,000,000 in 1939 and \$25,542,000,000 in 1929.



DURABLE GOODS EXPENDITURES IN THE UNITED STATES—1919-1940—Federal Reserve Board—Total expenditures in 1940 were the largest since 1929. Public outlays declined 7 per cent, but private expenditures increased 22 per cent as compared with 1939.

The rise was due to substantial increases in expenditures for privately-owned goods, as public construction* declined to \$3,354,000,000, off 7 per cent from the record peak of \$3,619,000,000 in 1939. Total outlays by private sources for durable goods amounted to \$18,769,000,000 in 1940, a jump of 22 per cent from the \$15,402,000,000 spent in 1939.

Most of the increased expenditures by private sources went for equipment. Outlays amounted to \$13,816,000,000 in 1940, a gain of 23 per cent over 1939 and only 7 per cent below the all-time peak of 1929. Purchases of mining, manufacturing, and commercial producers' equipment exceeded all previous records. Private plant outlays, on the other hand, came to \$4,953,000,000, about 40 per cent below 1929, and 6 per cent ahead of 1939.

* Includes outlays for military posts, yards, docks and hangars, for defense housing, and for publicly-owned productive plant.

INDUSTRIAL AND COMMERCIAL FAILURES

NUMBER OF FAILURES			CURRENT LIABILITIES <i>Thousands of dollars</i>			TOTAL LIABILITIES <i>Thousands of dollars</i>			DUN'S INSOLVENCY INDEX †						
	1941	1940	1939	1941	1940	1939	1941	1940	1939	UNADJUSTED			ADJUSTED ‡		
Jan.	1,124	1,237	1,567	11,888	15,279	20,790	12,535	15,805	24,860	62.2	67.1	86.0	51.8	54.6	69.9
Feb.	1,129	1,042	1,202	13,483	13,472	13,582	14,323	13,600	13,589	71.1	66.7	78.0	61.8	58.0	67.8
Mar.	1,197	1,322	.....	11,681	19,002	.....	12,130	19,315	...	62.6	72.6	...	61.4	71.9
Apr.	1,291	1,331	.....	16,247	18,579	.....	17,114	21,837	...	70.1	73.1	...	67.4	71.0
May	1,238	1,334	.....	13,068	15,897	.....	13,437	20,734	...	66.9	70.5	...	65.6	69.8
June	1,114	1,119	.....	13,734	12,581	.....	25,101	12,737	...	62.5	66.5	...	64.4	69.3
July	1,175	1,153	.....	16,213	14,999	.....	17,756	23,634	...	63.0	63.0	...	70.8	70.8
Aug.	1,128	1,126	.....	12,997	12,637	.....	13,223	13,092	...	60.6	61.4	...	71.3	72.2
Sept.	976	1,043	.....	11,397	10,545	.....	15,473	11,729	...	54.3	59.0	...	64.6	70.2
Oct.	1,111	1,234	.....	12,715	17,464	.....	14,236	18,119	...	61.7	67.0	...	67.1	72.8
Nov.	1,024	1,184	.....	16,572	13,201	.....	17,987	14,874	...	61.9	72.6	...	59.5	69.8
Dec.	1,086	1,153	.....	13,309	13,243	.....	14,480	14,934	...	58.0	65.0	...	57.4	64.3
Total	13,619	14,768	.....	166,684	182,520	.....	190,342	209,454	...	63.0	69.6	...	...	...

† Apparent annual failures per 10,000 enterprises. ‡ For seasonal variation.

ANALYZING *the* RECORD of INDUSTRIAL and COMMERCIAL FAILURES

INSOLVENCY INDEX JUMPS 9 POINTS

A TOTAL of 1,129 industrial and commercial failures were recorded during February 1941, compared with 1,124 in January this year and 1,042 in February 1940. Current liabilities to the amount of \$13,483,000 exceeded the \$11,888,000 in January, but were no higher than the \$13,472,000 which accompanied the fewer failures of a year ago.

The February total equalled the January total in spite of three fewer working days. On a daily basis the February failures actually exceeded those in January by about six a day. This amounted to an increase of about 13 per cent over January, compared with a usual seasonal decline of at least 5 per cent. Since January failures were very low in comparison with seasonal expectations, part of the February increase may have been the result of an accumulation of cases in which bankruptcy action was delayed beyond January. The combined total of 2,253 failures for the two

A BUSINESS FAILURE, as defined for this record, occurs when a commercial or industrial enterprise is involved in a court proceeding or a voluntary action which is likely to end in loss to creditors. Failures in this sense are but a small part of total discontinuances from business.

months is just about what the total would have been had the trend of failures in each of the two months conformed to the seasonal pattern. Nevertheless, a geographical analysis, which will be discussed later, points to a genuine rise in many sections of the country.

The movement of the Insolvency Index indicates how far the February record departed from normal. The index corrects for the short month and relates failures to the number of concerns in business. The index rose nearly 9 points, from 62.2 in January to 71.1

in February. An increase of this magnitude contrary to the normal downward tendency at this time of year caused a sharp 10-point rise in the adjusted index, from 51.8 in January to 61.8 in February. The rise brought to an end the continuous downward trend of the adjusted index during November, December, and January which totalled 15 points. In one month this February rise has wiped out two-thirds of the previous decline. The general level of failures in February, according to the index, was between 6 and 7 per cent under that a year ago, when the index was also on its way up from a January low.

The actual number of failures rose in February in all the main industry groups except retail trade. The industry group totals for January and February, however, should also be reduced to daily averages before they are compared. On a daily basis even retail trade failures increased. The rise

amounted to 7 per cent, compared with 30 per cent in manufacturing, 24 per cent in wholesale trade, 18 per cent in construction and 76 per cent in commercial service.

The increases were well distributed among the individual lines of business. In manufacturing, additional failures occurred in nearly all the sub-groups and were especially heavy in machinery and furniture. Failures were down among distributors of dry goods and apparel, but were up in most other wholesale lines.

In retail trade, food, furniture, hardware and auto accessory stores, and restaurants and taverns went out in increased numbers. Drug store failures were down, and little change took place in clothing and accessory shops. The unusually large increase in commercial service failures was mainly in trucking and in dyeing, cleaning and pressing lines.

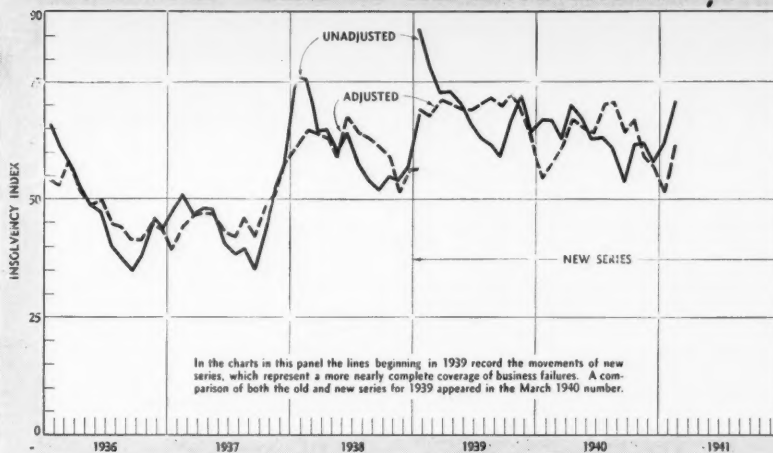
The February rise in manufacturing failures reversed a very marked downward trend in December and January. The retail trade rise, on the other hand, continued a general upward movement in effect since last September.

Manufacturing and wholesale failures are about equal in number with those a year ago; while retail trade and service defaults are appreciably higher. The additional retail failures occurred in foods, apparel, automobiles, restaurants, and particularly in building materials.

INDUSTRY GROUP	Feb. 1941	Feb. 1940	Per Cent Change
Manufacturing . . .	182	184	- 1
Wholesale Trade . .	104	102	+ 2
Retail Trade	719	642	+12
Construction	58	66	-12
Commercial Service .	66	48	+38
Total	1,129	1,042	+ 8

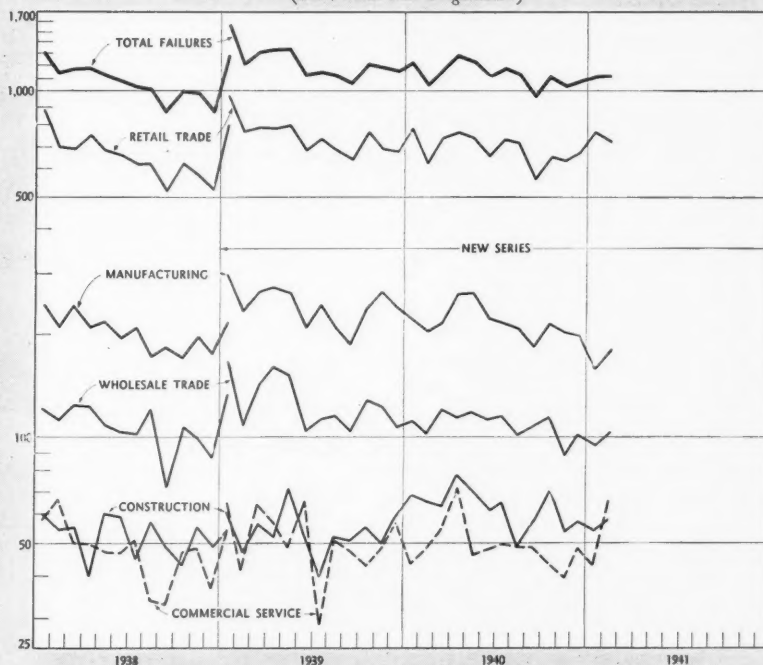
The distribution of February failures by size of concern was very similar to that in January. There was possibly a slight shift in weight from the small to the medium-sized failures. Large failures remained unchanged in number at 20. Compared with a year ago, small failures are now more numerous and account for 3 per cent more of total

MONTHLY TREND OF THE INSOLVENCY INDEX



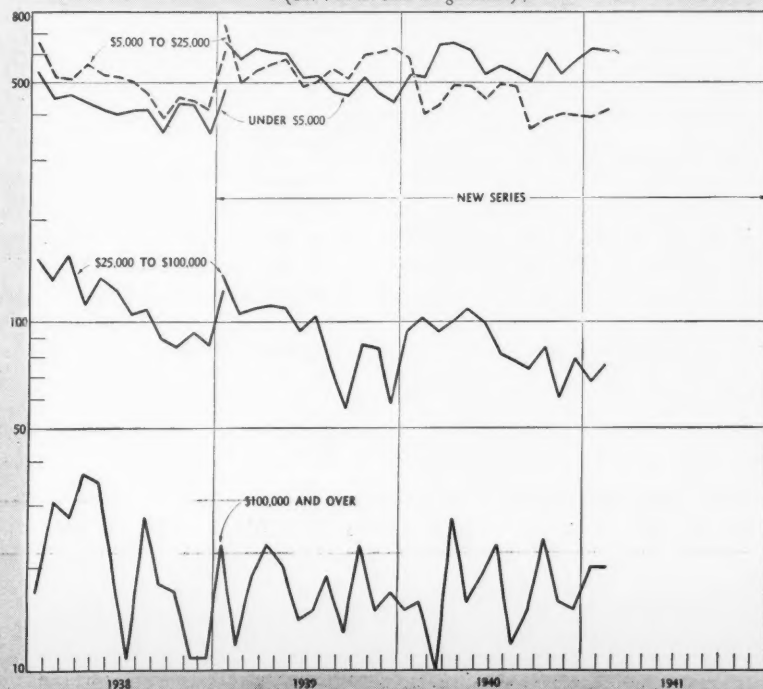
FAILURES BY INDUSTRIAL GROUPS

(The Vertical Scale is logarithmic)



FAILURES BY SIZE OF LIABILITIES

(The Vertical Scale is logarithmic)



failures than previously. The medium-sized failures with liabilities between \$25,000 and \$100,000 in February were down from 105 to 76 and constituted 3.4 per cent less of the total.

SIZE GROUP LIABILITIES	Feb. 1941	Feb. 1940	Per Cent Change
Under \$5,000	620	519	+19
\$5,000-\$25,000	413	402	+3
\$25,000-\$100,000	76	105	-28
\$100,000-\$1,000,000	20	16	+25
\$1,000,000 and over .....	..	..	..
Total	1,129	1,042	+8

That the February rise was in part a genuine one and not entirely a reaction from the unusually low January was indicated by the fact that in some of the Federal Reserve Districts an approximately normal January increase was followed, not by a normal February drop, but by a continued rise. That was so in the Cleveland, Richmond, and Atlanta districts. Also in the New York and Kansas City areas fairly normal January failures were followed by an equal number of closings in February rather than by fewer. The situation in the Boston, Philadelphia, St. Louis, and San Francisco areas, however, did appear to have elements of reaction, declines or very slight rises last month being followed by exceedingly sharp increases in February. Contrariwise, definite downward trends appear to have been developing in the Chicago and Minneapolis districts.

FEDERAL RESERVE DISTRICTS	Jan.-Feb. 1941	Jan.-Feb. 1940	Per Cent Change
Atlanta	80	122	-34
Minneapolis	29	38	-24
Chicago	255	325	-22
Richmond	92	104	-12
New York	841	872	-4
Kansas City	91	92	-1
Cleveland	120	118	+2
Philadelphia	170	148	+15
St. Louis	75	65	+15
San Francisco	240	200	+20
Boston	186	149	+25
Dallas	74	46	+61
Total	2,253	2,279	-1

On a daily basis, the February rise was fairly evenly divided between the large cities and the balance of the country. Particularly sharp rises occurred in Los Angeles, San Francisco, Milwaukee, and Buffalo.

FAILURES BY DIVISIONS OF INDUSTRY—FEBRUARY 1941 AND 1940

(Current liabilities in thousands of dollars)

	Number			Liabilities		
	Feb. 1941	Jan. 1941	Feb. 1940	Feb. 1941	Jan. 1941	Feb. 1940
TOTAL UNITED STATES	1,129	1,124	1,042	13,483	11,888	13,472
MINING AND MANUFACTURING (total)	182	161	184	5,983	4,217	4,876
*Mining—Coal, Oil, Miscellaneous	7	7	6	294	197	226
Food and Kindred Products	25	27	36	1,052	894	1,104
Textile Mill Products and Apparel	42	44	42	600	820	497
Lumber and Lumber Products	24	15	21	765	293	586
Paper, Printing and Publishing	13	16	19	185	524	856
Chemicals and Allied Products	7	7	7	172	88	290
Leather and Leather Products	7	6	13	127	214	247
Stone, Clay, and Glass Products	2	4	2	24	163	52
Iron and Steel, and Products	5	6	8	354	555	58
Machinery	15	5	7	503	29	512
Transportation Equipment	5	1	1	619	7	214
Miscellaneous	30	23	22	1,288	433	234
WHOLESALE TRADE (total)	104	95	102	1,611	1,629	1,863
Food and Farm Products	37	36	35	620	869	503
Apparel	4	9	10	42	116	92
Dry Goods	4	6	3	51	149	24
Lumber, Building Materials, Hardware	11	7	8	317	97	266
Chemicals and Drugs	4	3	2	30	34	7
Motor Vehicles and Automotive Equip	6	8	8	178	92	76
Miscellaneous	38	26	36	373	272	895
RETAIL TRADE (total)	719	771	642	4,501	5,084	4,503
Food and Liquor	201	221	190	832	1,265	1,015
General Merchandise	38	52	47	126	303	234
Apparel and Accessories	145	167	136	852	1,115	918
Furniture, Home Furnishings	56	49	49	376	432	378
Lumber, Building Materials, Hardware	40	33	27	558	246	228
Automotive Group	56	51	34	335	441	303
Eating and Drinking Places	105	94	87	805	685	693
Drug Stores	31	39	30	315	208	389
Miscellaneous	47	65	42	302	389	345
CONSTRUCTION (total)	58	54	66	836	599	1,655
General Building Contractors	20	18	16	433	292	759
Building Sub-contractors	35	33	46	286	225	585
Other Contractors	3	3	4	117	82	311
COMMERCIAL SERVICE (total)	66	43	48	552	359	575
Passenger and Freight Trans.—Highway	19	11	12	144	98	223
Miscellaneous Public Services	2	1	..	57	8	..
Hotels .....	..	..	5	..	..	59
Cleaning, Dyeing, Repairing	12	4	11	38	23	124
Laundries	7	4	1	120	101	2
Undertakers	5	4	2	40	34	18
Other Personal Services	6	5	11	17	17	123
Business and Repair Services	15	14	6	136	78	26

* Subtract this item to obtain manufacturing total.

Canadian Failures

Canadian failures, reversing a downward trend, rose to 105 in February with liabilities of \$777,000 from 79 in January with debts of \$435,000. A year ago there were also 105 failures, but debts totalled \$894,000. The rise took

place all over the Dominion and in all industry groups except manufacturing. Compared also with a year ago manufacturing failures were slightly down. Otherwise the industry breakdown was very similar in the two periods. Very small failures were more numerous than a year ago.

SIGNIFICANT BUSINESS INDICATORS

COMPILED BY THE STATISTICAL STAFF OF "DUN'S REVIEW"

More detailed figures appear in "DUN'S STATISTICAL REVIEW"

Building Permit Values—215 Cities

GEOGRAPHICAL DIVISIONS:	February 1941	February 1940	Per Cent Change	January 1941	Per Cent Change
New England.....	\$5,677,362	\$3,255,821	+ 74.4	\$4,371,007	+ 29.9
Middle Atlantic.....	20,216,009	31,825,171	- 36.5	27,831,509	- 27.4
South Atlantic.....	9,555,354	8,907,778	+ 7.3	11,792,111	- 19.0
East Central.....	20,414,457	17,480,063	+ 16.8	20,562,048	- 0.7
South Central.....	9,183,815	8,338,810	+ 10.1	9,966,501	- 7.9
West Central.....	3,864,183	4,784,277	- 19.2	3,214,638	+ 20.2
Mountain.....	1,931,991	1,286,937	+ 50.1	1,717,843	+ 12.5
Pacific.....	22,757,493	14,644,148	+ 55.4	26,102,884	- 12.8
Total U. S.....	\$93,600,664	\$90,523,005	+ 3.4	\$105,558,541	- 11.3
New York City.....	\$13,675,776	\$21,109,022	- 35.2	\$19,573,412	- 30.1
Outside N. Y. C.....	\$79,924,888	\$69,413,983	+ 15.1	\$85,985,129	- 7.0

Bank Clearings—23 U. S. Cities

(Millions of dollars)

	Monthly			Daily Average		
	1941	1940	1939	1941	1940	1939
January.....	26,155	24,140	23,383	1,005.9	928.5	935.3
February.....	22,687	20,641	19,885	1,031.2	897.4	903.8
March.....	23,833	25,192	25,192	916.7	933.0	933.0
April.....	23,587	21,931	21,931	907.2	879.2	879.2
May.....	24,361	22,374	22,374	936.9	860.5	860.5
June.....	21,838	23,212	23,212	873.5	892.8	892.8
July.....	22,939	21,576	21,576	882.3	863.1	863.1
August.....	21,046	22,782	22,782	779.5	843.8	843.8
September.....	21,083	24,015	24,015	878.5	960.6	960.6
October.....	25,289	22,469	22,469	972.7	898.8	898.8
November.....	25,224	22,807	22,807	1,096.7	991.6	991.6
December.....	27,862	26,827	26,827	1,114.5	1,073.1	1,073.1
Total.....	281,843	276,503	276,503	932.0	919.6	919.6

Bank Clearings for Individual Cities

(Thousands of dollars)

	February 1941	February 1940	Per Cent Change	January 1941
Boston.....	997,159	871,294	+ 14.4	1,128,466
Philadelphia.....	1,793,000	1,605,000	+ 11.7	2,039,000
Buffalo.....	155,772	140,607	+ 10.8	174,878
Pittsburgh.....	620,473	530,186	+ 17.0	712,483
Cleveland.....	473,707	404,524	+ 17.1	548,811
Cincinnati.....	271,491	236,573	+ 14.8	303,693
Baltimore.....	364,100	300,863	+ 21.0	408,687
Richmond.....	184,541	160,990	+ 14.6	217,119
Atlanta.....	317,400	245,900	+ 29.1	336,600
New Orleans.....	184,756	165,838	+ 11.4	209,275
Chicago.....	1,338,315	1,233,300	+ 8.5	1,538,815
Detroit.....	592,215	441,265	+ 34.2	682,389
St. Louis.....	394,397	347,822	+ 13.4	439,919
Louisville.....	185,697	150,383	+ 23.5	204,653
Minneapolis.....	271,576	258,801	+ 4.9	314,455
Kansas City.....	390,102	348,575	+ 11.9	466,892
Omaha.....	125,879	119,955	+ 4.9	142,566
Dallas.....	248,895	230,578	+ 7.9	287,023
Houston.....	212,582	194,416	+ 9.3	243,084
San Francisco.....	618,401	583,300	+ 6.0	699,883
Portland, Ore.....	151,255	117,742	+ 28.5	168,888
Seattle.....	183,308	147,290	+ 24.5	201,877
Total 22 Cities.....	10,075,021	8,835,202	+ 14.0	11,469,456
New York.....	12,611,576	11,805,642	+ 6.8	14,685,100
Total 23 Cities.....	22,686,597	20,640,844	+ 9.9	26,154,556

Dun & Bradstreet Wholesale Food Price Index

The index represents the sum total of the wholesale price per pound of 31 commodities in general use.

1941	1940	1939
Mar. 25.. \$2.69	Mar. 26.. \$2.29	Mar. 28.. \$2.29
Mar. 18.. 2.65	Mar. 19.. 2.29	Mar. 21.. 2.31
Mar. 11.. 2.61	Mar. 12.. 2.31	Mar. 14.. 2.29
Mar. 4.. 2.59	Mar. 5.. 2.32	Mar. 7.. 2.34
Feb. 25.. 2.55	Feb. 27.. 2.30	Feb. 28.. 2.33
Feb. 18.. 2.55	Feb. 20.. 2.34	Feb. 21.. 2.32
Feb. 11.. 2.55	Feb. 13.. 2.33	Feb. 14.. 2.31
Feb. 4.. 2.54	Feb. 6.. 2.34	Feb. 7.. 2.30

High Low

1941.. \$2.69	Mar. 25	\$2.50	Jan. 7
1940.. \$2.49	Dec. 10	\$2.18	June 18
1939.. \$2.46	Sept. 19	\$2.13	Aug. 15

Dun & Bradstreet Daily Wholesale Price Index 30 Basic Commodities

(1930-1932 = 100)

	1941	1940	1939
	Mar.	Feb.	Jan.
1.....	124.31	123.42	*.....
2.....	124.31	123.42	124.89
3.....	124.30	123.43	124.60
4.....	124.31	123.34	124.59
5.....	124.20	123.48	124.23
6.....	124.73	123.56	124.93
7.....	124.80	123.76	124.24
8.....	125.10	123.82	124.54
9.....	125.10	123.82	125.21
10.....	126.35	123.86	125.12
11.....	126.10	123.27	124.86
12.....	126.09	*.....	124.89
13.....	126.25	123.06	123.98
14.....	126.53	123.35	124.06
15.....	126.74	123.18	124.94
16.....	126.74	123.18	125.05
17.....	126.33	123.03	124.67
18.....	127.38	123.52	124.57
19.....	127.64	123.62	123.30
20.....	127.75	124.03	124.55
21.....	127.68	123.65	124.03
22.....	127.60	*.....	124.31
23.....	127.60	123.65	124.17
24.....	127.89	124.36	124.79
25.....	127.95	124.39	124.65
26.....	128.45	124.38	123.49
27.....	128.48	124.18	124.05
28.....	129.17	124.31	123.72
29.....	129.17	124.31	123.39
30.....	129.17	124.31	123.81
31.....	129.17	124.31	123.55

† Sunday. * Markets closed.

High Low

1941.. 129.17	Mar. 28	123.03	Feb. 17
1940.. 124.84	Dec. 31	112.42	Aug. 19
1939.. 124.19	Dec. 18	101.40	July 24

HERE AND THERE IN BUSINESS

WHAT'S NEW AS OBSERVED BY AGENCY REPORTERS



COLD LIGHT—Under ultra violet rays, Formica displays of fluorescent, inlaid Bakelite laminated sheets will glow mysteriously.



JOINTLY—Made by General Electric and American Locomotive Companies jointly, several new 2,000 and 4,000 h.p. diesel-electric passenger locomotives are geared for a maximum safe speed of 120 miles.

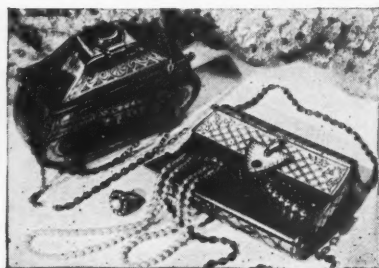


PHOTO FROM REHNQUIST

GOLD—These gold-plated plastic jewel caskets, retailing at \$50 and \$25, are made of Celluloid's Lumarith. They were designed by Ardor of Paris, now of New York. The gold plating method used is said to give an enduring coat of the metal.

Airport—On the outskirts of Opa Locka, a Florida town having six recorded business enterprises and a population of about 600, the country's largest airport landing field takes its sprawling shape. Officially sponsored by the City of Miami, some twenty miles distant, Miami International Airport has been under construction for eighteen months. Hopes are that the field and Miami Air Terminal will be finished this year.

Pan American Airways, Inc., Eastern Air Lines, Inc., and National Air Lines, Inc., are expected to establish permanent bases at the airport. Pan American's land plane Clippers, a recent development for use over the Caribbean, will be based there.

Four runways at the field are 200 feet wide by, variously, 4,700 feet to 6,000 feet long. To construct them it was necessary to remove 100,000 cubic yards of muck and to make an hydraulic fill of about 650,000 cubic yards of sand.

Martin—The Glenn L. Martin Company's annual report was remarkable for nine pages with thirty photographs of Martin planes, production, and the two expanded factories at Middle River, Md.

From 1939 to 1940, Martin increased its employment from 3,500 to 13,000 workers. By the end of this year, at maximum capacity, the payroll is ex-

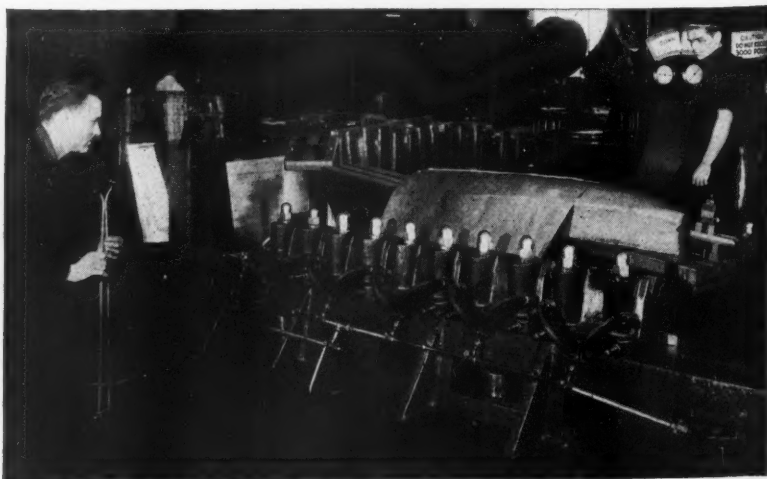
pected to hit 42,000. Part of this vast expansion is being handled by simplifying individual manufacturing processes. Six of the photographs in the report showed two typical operations of assembly in which mechanical guides and patterns assure accuracy and interchangeability.

Other airplane manufacturing operations shown include use of a metal-stretching press (the company says it's the first in America to adopt this method of forming compound surfaces of sheet metal); hydraulic presses, air-operated drop hammers; work simplification, a moving assembly line, and the "largest camera in the world" (for accurately reproducing full-scale drawings on metal, paper, or cloth).

New Martin medium bombers are designed for quantity production in such a manner, according to the report, that one plane consists of 32 major sub-assemblies. These contain 650 minor sub-assemblies with 20,000 separate parts exclusive of fastenings.

Firefly Business—Once pretty well limited to lady fireflies and ghosts, cold light is now a product of big business. Physicists have investigated and classified its causes and kinds; and fluorescent lamps may be halving the light bill for some corner "dog wagon" where your truckmen eat.

STRETCH—To shape airplane "skins" more rapidly than by three hours of "bumping" in a power hammer and less expensively than forming over special dies in a drop hammer, the Glenn L. Martin Company uses a 3-minute pull in this hydraulic stretching press.



There are several kinds of cold light. As summarized by Arthur D. Little, Inc., they include chemical luminescence, which is responsible for the firefly's ecstatic tail; fluorescence, which is a light given off only as chemicals react to continuing ultra violet and other high energy rays; phosphorescence, a continuing glow emanating from bacteria; and triboluminescence, a glow which accompanies mechanical acts in the dark, as with the breaking of a sugar wafer.

Chemical luminescence in the firefly is said to be caused when air, drawn into the glow organ, oxidizes a chemical called luciferin under the catalytic influence of an enzyme called luciferase.

Fluorescence, of course, is best known in lighting. Its other early uses in industry have included point of sale displays of Bakelite laminated plastic (Formica Insulation Company, Cincinnati, Ohio); Conti-glo ink, made by Continental Lithograph Corporation, Cleveland, Ohio; and theater carpet made by the Alexander Smith & Sons Carpet Company, Inc., Yonkers, N. Y. The carpet glows under invisible rays from an usher's flashlight.

Fluorescence is also used in television tubes, where it makes the pin-points of light glow for a fraction of a second after the energy has been directed further along the scanning surface.

Nurse—About 1,000 firms in New York City employ a service which sends nurses to visit the homes of sick employees. Recently, the work was extended to include visits to plants. A bank and a factory working on defense orders were first to try it. The nurses are engaged from the Henry Street Visiting Nurse Service on an hourly fee basis. For several years businesses in Philadelphia have employed the Visiting Nurse Service to decrease employee absences due to illness.

Plated Plastic—The plating of plastics is not new, but production has had to overcome many difficulties. Sometimes the metal would tarnish or wear off quickly. Now, however, new lacquers and methods provide a finish considered enduring.

To plate on plastic the surface must be varnished and, while still tacky, sprayed with a conducting agent, such

Let's Look At An X-RAY PICTURE

by Westinghouse



checked with x-rays. Scientists in the laboratory look inside of bugs and plants and textiles with x-rays. Museums x-ray doubtful portraits to see if there's another sketch beneath the "old master."

• *But*, much more important than any of these, is the day-by-day job of x-rays in preserving health and curing disease. The army makes x-ray pictures of chests of the men it calls into service. Health authorities send traveling x-ray equipment, even into the remotest districts, to examine school children.

• *In many of the country's great industries everybody*—from the president to the apprentice—is x-rayed to make sure that he is physically fit for his job.

• *You'll find it an interesting experience to talk to a roentgenologist*—a physician who specializes in this fascinating branch of medicine. Ask him to let you look at a radiograph—an x-ray picture. It may seem just a blur of grays and whites and blacks. But he can read those strange shadows cast by invisible light on a photographic film and show you how they make it possible to recognize tuberculosis and many other diseases early enough for treatment to be really effective. And he'll explain to you how those same x-rays can often cure cancer that once would have been declared hopeless.

• *X-rays serve an almost unbelievable variety of purposes.* So it is only to be expected that at our Long Island City, N. Y. plant, where x-ray apparatus is built, you will find a surprising variety of equipment. We at Westinghouse enjoy working in this field, because its many problems offer a constant challenge to research and engineering.

• *This is an x-ray picture.* It isn't half as exciting as the pictures you see at the movies or those you make yourself. But for sheer importance, x-ray pictures top them all.

• *The design and manufacture of the equipment that makes these x-ray pictures is one of the most interesting and exacting branches of our business.* One of the reasons is its variety, for today, both industry and the medical profession make many uses of x-rays. Most equipment must be specially engineered. With the exception of a few models, it's the kind of business that can't be catalogued.

• *Here are some of the ways that x-rays serve today.* Armor plate may look flawless on the surface, but still have treacherous, weak spots inside. So, x-rays are flashed through inches of steel, because in the Navy Yards they refuse to guess on the toughness of a battleship's hide.

• *In the foundry, x-rays are used to inspect castings.* Welds on pressure vessels that must hold hundreds of pounds of live steam are

More than likely there's a Westinghouse X-Ray Office in your city, or very nearby. You'll find it listed in the classified section of the telephone directory. If these men can be of service to you, feel free to call upon them any time. Headquarters address is: Westinghouse X-Ray Division, Long Island City, New York.

LESS THAN 1700

*Time ebbs away... Every clock-tick
brings us closer to the end of 1941...
The average business office has less
than 1700 normal working hours left!*

The only way America can Get more
time is to Save it. Let's make
Time Saving a National Obligation.

Underwood Master Typewriters



Save Typing Time—Executives and secretaries know that Underwood Typewriters save important office time by producing a higher quality of finished work with greater ease and increased speed. Underwood's extreme simplicity and operating ease make it the choice of typists everywhere. That is why over 5 million office-size Underwood Typewriters have been produced and sold. Telephone our local Branch for a free trial in your own office.

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Save Accounting Time—Take care of Accounts Receivable and Payable. Maintain stock records, handle pay rolls, including all records demanded by Federal and State governments! Underwood Elliott Fisher not only produces three complete lines of accounting machines but maintains a nation-wide organization to help your own accounting department develop the right machine method. Telephone our local Branch today!

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HOURS LEFT

IN

1941

...DON'T WASTE A MINUTE!



Underwood Sundstrand Adding-Figuring Machines



Save Figuring Time—Place greater speed and accuracy behind your figuring jobs with the famous streamlined Underwood Sundstrand. With only 10 numeral keys the operator employs Touch Figuring just as your secretary uses Touch Typing. With a mere handful of keys to operate she keeps her eyes on her "copy"—not on the keyboard. Underwood Sundstrand *Simplicity* is your assurance of *Accuracy*. Telephone our local Branch for a free trial.

Underwood Portable Typewriters

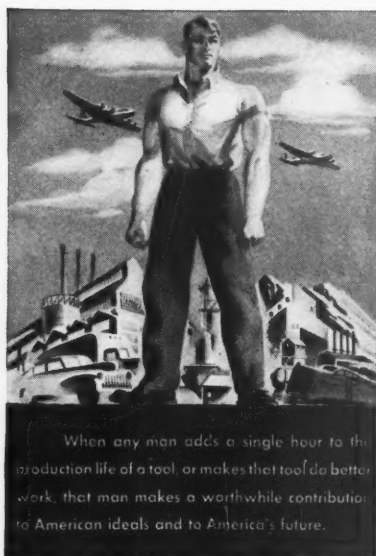


Save Personal Time—Order an Underwood Portable for use at home . . . to get the jump on tomorrow's work today! The famous Underwood Champion Portable embodies many features of the big business Underwood. There is a wide range of Noiseless and Standard models from which to choose. Telephone any Underwood Dealer or our local Branch for a free trial.

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Machine is Backed
by Nation-Wide
Company
Owned
Service!

-Speeds the World's Business!

UNDERWOOD ELLIOTT FISHER COMPANY, ONE PARK AVE., NEW YORK, N. Y.



JOE GREEN—Believing that tool manufacturers should help train new mechanics to use and care properly for tools, Koebel Diamond Tool Company, Detroit, Mich., issues an 11 by 17-inch cardboard poster (above), a brochure, "Meet Joe Green, Grinder Hand," and "For Grinder Men Only," a booklet on the right and the wrong care and dressing of grinder wheels.

as powdered bronze or graphite. Plating is limited to the area sprayed. After a stop bath to prevent breaking down of the coating, regular plating procedure is followed to give the plastic a copper, then a nickel, silver, or gold covering.

For quality work, silver deposits .001 inch thick are generally used as a base. Over all is a special lacquer, to eliminate oxidation. Enough gold can be deposited to allow retail prices of \$50 to \$75. The resulting object has the lightness of plastic and the finish of metal.

Blowout Rim—When a tire blows out, its bead slips inward toward the well of the rim. To a man in California a few years ago came the thought that if he could keep the bead from slipping into the well, blowout danger would be lessened.

The Californian invented a rim which supported the bead, sold the rights to Chrysler Corporation. Then came a year of experiment: testing the rim, fitting it into the production and assembly line, and devising a tire changing tool for motorists.

Two humps or ridges on the new rim support the tire beads. A hump six one-thousandths (.006) of an inch

high was found sufficient and, according to a description in the Chrysler Corporation's employee magazine, holds the tire so effectively that a man can start driving on a blowout and, at 40 miles an hour, find himself riding on what seems merely a soft tire.

Luminous—Plastics which glow in the dark have been furnishing amusement and excitement to several thousands of kids who obtain them as premiums from General Mills, Inc., Minneapolis, Minn. One item is a "Jack Armstrong" dragon's eye ring, made in a single size but with an eighth of an inch snipped off the bottom. The people it won't fit can squeeze the

ties, Cruver Manufacturing Company, Chicago, Ill.

The glowing plastic, known as Cruverlite, costs 10 or 15 per cent more than untreated plastics. Monsanto Chemical Company, St. Louis, Mo., furnish it to Cruver for the light treatment. It discharges its glow for several hours and then must be renewed by exposure to an electric light or, briefly, to sunlight. Cruver's luminous pigment is a derivative of calcium sulphide. Neither radio-active, nor poisonous, it is used on paper, paint, ink, and plastics.

Light storing, phosphorescent pigments can be made from sulphides of zinc, calcium, and strontium. They



SCANACORD—With this camera, developed by two employees of Arthur Kudner, Inc., advertising agency, eye movements and what they see are recorded, noting whatever section of a poster, page, or package receives the most attention, and in what order. Small, moving automobiles sometimes interrupt observation of miniature billboards.

plastic after heating it in warm water.

There's also a bracelet of luminous gardenias—plastic too—which glow in a darkened room and come to pretty Wheaties eaters for a box top and a quarter.

Not offered as a premium is a life-size gardenia to be worn on a dress or in the hair. This is sold by Miles Kimball Company, Oshkosh, Wis. Another luminous plastic item is a fish lure sold by the Shakespeare Company, Kalamazoo, Mich. And mothers whose small children cry in the dark can get luminous stars, planets, and moons, to be pasted on the nursery ceiling, from the molder of all these luminous special-

have had considerable use during blackouts in Europe to mark pedestrians, house numbers, streets, and traffic obstacles such as bomb holes.

Retirement—A retirement income plan rewarding each participant in keeping with his salary became effective April 1 for 5,018 employees and officers of the National City Bank of New York as well as some subsidiaries. Eligibility begins after one year of service.

For service before April 1, the bank foots the bill, contributing as his monthly benefit payments 2 per cent of a participant's monthly salary on that date, multiplied by the length of his



To MAKE it easier to have a clean plant Palmer Shile Company, Detroit, Mich., make this portable shop cleanup cart.

continuous service since the age of 30 (not exceeding 30 years). For service after April 1, the bank and the participant contribute on a percentage basis toward a group annuity contract with the Equitable Life Assurance Society of the United States. The individual's contribution is from 2 to 5 per cent, the bank paying an equal or higher share.

Normal retirement age is 65 but retirement is allowed after 60. Employees who leave before this age lose their past service allowance but receive their contributions and interest.

Training—One of the largest worker training programs in defense industries is going on at 40 General Motors Corporation's plants. In this emergency training the trainees are taught only specific operations; the plan for training is varied to meet local needs.

In some plants, trainees are taught on the job, working as assistants to experienced operators or alone on a machine under the general supervision of a set-up man. Those showing promise are up-graded to more complex work. Beginners at Hyatt Bearings division practise on machines set aside for the purpose in a "vestibule school."

The group method of instruction is in use at Saginaw Steering Gear division. Green hands in small classes are placed under individual instructors who give them one hour of classroom work a day and supervise them in the shop.

Mainspring of these activities is 21-year old GM Institute, now training 13,000 men in an expanded day and night program. In all, General Motors expects to require a trained manufacturing personnel of up to 60,000 workers for defense orders.

This is the famous KARDEX "Reveal All" VISIBLE MARGIN OF CONTROL



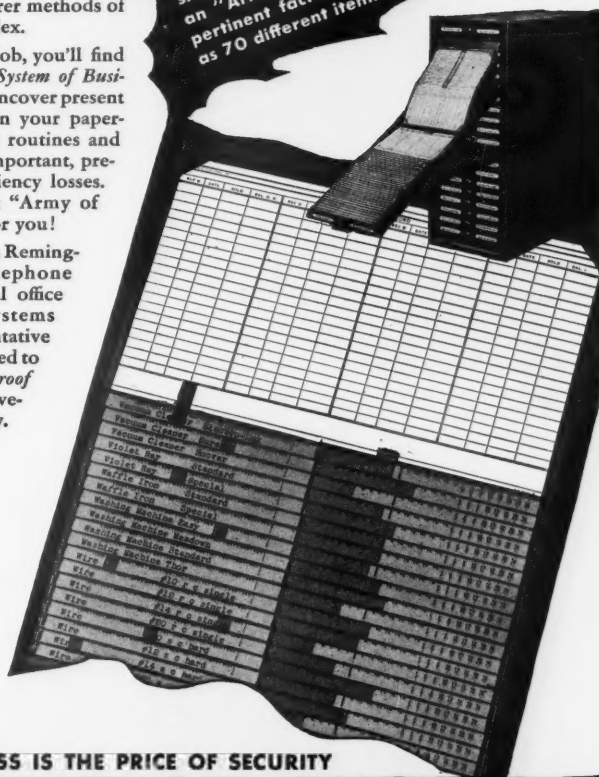
Now, while we're in the throes of America's largest preparedness drive, business control methods must be geared to an unprecedented production pace.

For Inventory, Procurement, Production, Personnel, Accounting and Sales records you can't install simple or surer methods of control than Kardex.

Whatever your job, you'll find a Kardex Visible System of Business Control will uncover present "bottlenecks" in your paperwork and record routines and what's equally important, prevent future efficiency losses. Put the Kardex "Army of Facts" at work for you!

Get in touch with Remington Rand. A telephone call to our local office will bring a Systems Division representative in to see you, armed to the teeth with proof of Kardex effectiveness! Call today.

A glance at the "Reveal All" Kardex visible margins in a single slide instantly discloses an "Army of Facts" ... all the pertinent factors of as many as 70 different items!



PREPAREDNESS IS THE PRICE OF SECURITY

REMINGTON RAND INC.
BUFFALO • NEW YORK • BRANCHES IN ALL CITIES

NO "BOTTLENECK" HERE...!



Production running 100% over last year! \$1,300,000 spent for three new plant additions! Three shifts—24 hours a day! Employment up! Peak efficiency! That's how the Warner & Swasey Co. answered the call for turret lathes—Defense's No. 1 machine tool need!

NO "BOTTLENECK" HERE...!



Warner & Swasey's "front office" production keeps step with shop output! Sales Manager Walter K. Bailey (*above*) says, "Our executives materially increase their capacity by dictating memoranda, details, correspondence to their Ediphones."

Break through the bottleneck of business detail
by *talking* your work away!

In National Defense industries . . . in offices . . . wherever executive capacity may be hampered by business details—Edison Voicewriters are needed. How about *you*—are you getting the most out of yourself? To see how a new Ediphone will step up *your* output, just 'phone "Ediphone," your city or write us, Dept. D4, (address below).



EDISON
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POSTWAR DEPRESSIONS

(Continued from page 17)

significance for the United States than for the belligerent nations. If we enter the war, we may also see some of the devastation at first hand, but it is difficult to imagine it reaching the tragic extent of that in Europe. It is, of course, not impossible that the world is facing a long period of conflict, intermittent or continuous. The extent to which the historical pattern is of significance in the United States depends to some extent on the duration of international unsettlement and whether the peace will be a peace in fact or not. I know of no period in the history of the world where, on a quantitative basis at least, the future has been more unpredictable. This very condition requires us to make even greater efforts to meet eventualities. If we continue our present status, the war for us will clearly be a matter of dislocation rather than destruction, assuming a relatively short war. The problems for us may then be greater than in the post-World War period, but they will be much the same in kind.

It is not a new thought that the post-war strains can be eased by means of careful planning and continued government participation. The home-stead program in this country after the Civil War was devised to reduce the pressure on the labor markets of returning soldiers. However, the volumes of discussion and debate which were published in 1918 concerning the problems of demobilization were of little avail in the face of the actual circumstances. Not a single nation escaped the depression, regardless of the wisdom of its statesmen.

There is no way of altering the fact that the economic machine must run differently in wartime and in peacetime. Factories must be used for different purposes. The working force must be differently distributed. Nevertheless, there are choices to be made in war-planning and one of the important factors should be peace-planning. It is most encouraging to know that such thoughts are in the minds of the Defense Commission as it proceeds with its difficult task. It may be that we can deliberately postpone some economic

activities, such as normal public construction, to provide a backlog of requirements for the day when the economic machine begins to stall. After the World War, England strengthened herself with a tremendous housing program. In our own case, it was a matter of good fortune that the automobile industry had reached maturity and was ready to move into its present place among our leading industries. Much can be done by private industry to be ready with new products and uses against the day when the armament pressure slackens on our economic machine.

We are on a path from which the government, in its position as a dominant customer, must not suddenly withdraw. Economically speaking, wars do not begin with the declaration of war, assuming that there is one, but with the construction of armament and the accumulation of war materials. Whether the war materials are destroyed or accumulated for future use is not the significant economic point, but rather that economic energy is diverted to war production. Similarly, wars cannot end, economically speaking, with the signing of the peace. Just as we have accepted the dominant interest of government in war preparedness, we must accept it as directing the adjustments in the postwar years. The answer is not merely to liquidate it as the great war customer but to continue it during the hard years as the great peace customer.

Planning, Now and Later

The extent to which "strong government" in the United States will be required when peace comes is a ratio of the extent of dislocation to the amount of advance planning with which we meet the peace. A very conscious planning effort undoubtedly will lessen the extent to which government might need to participate in the readjustment period, and while it now seems rather dreamlike to envisage whatever may be the new kind of a peaceful world, economists owe a profound duty to their calling to attempt to think about it. I even suggest it might be done on an organized basis with an organization of government leaders, business men, and economists who would now attempt to encompass, in an advisory way, the kind of problem we shall eventually have to face.

THE PENNSYLVANIA RAILROAD

SUMMARY OF ANNUAL REPORT FOR 1940

THE 94th Annual Report of the Pennsylvania Railroad Company covering operations for 1940 will be presented to the stockholders at the annual meeting on April 8, 1941. Operating revenues increased \$46,662,630 or 10.8% over 1939. Operating expenses increased \$31,553,843 or 10.3%. Taxes increased \$3,789,341 or 9.5%. Net income was \$46,238,250 an increase of \$14,205,725. Surplus was \$36,896,665 equal to 5.60% (\$2.80 per share) upon the outstanding Capital Stock (par \$50) as compared with 3.52% (\$1.76 per share) in 1939.

OPERATING RESULTS

	1940	1939
TOTAL OPERATING REVENUES WERE	\$477,593,408	\$430,930,778
TOTAL OPERATING EXPENSES WERE	338,454,678	306,900,835
LEAVING NET REVENUE FROM RAILWAY OPERATIONS OF	139,138,730	124,029,943
TAXES AMOUNTED TO	43,885,188	40,095,847
HIRE OF EQUIPMENT AND JOINT FACILITY RENTS WERE	8,754,056	6,629,768
LEAVING NET RAILWAY OPERATING INCOME OF	86,499,486	77,304,328
INCOME FROM INVESTMENTS AND OTHER SOURCES WAS	*41,335,655	36,864,230
MAKING GROSS INCOME OF	127,835,141	114,168,558
FIXED CHARGES, CHIEFLY RENTALS PAID TO LEASED ROADS, AND INTEREST ON THE COMPANY'S DEBT	81,596,891	82,136,033
LEAVING NET INCOME OF	46,238,250	32,032,525
APPROPRIATIONS TO SINKING AND OTHER FUNDS, ETC.	9,341,585	8,854,839
SURPLUS	36,896,665	23,177,686

*Includes dividend of \$5,000,000 in securities received from Pennsylvania Company.

Dividends aggregating 3% (\$1.50 per share) were paid during 1940 compared with 2% (\$1.00 per share) in 1939.

The Management recognizes its responsibility to give the stockholders salient facts relating to the Company's business, service, finances and other important matters and does so through the medium of the press and the annual report. Through the cooperation of the security holders, the public and the employees, your Company is able to give good service, pay good wages, meet its obligations and pay dividends.

M. W. CLEMENT, President

THE PENNSYLVANIA RAILROAD

SHIP AND TRAVEL VIA PENNSYLVANIA

Stockholders can obtain copies of the Annual Report from
J. Taney Willcox, Secretary, Broad Street Station Building, Philadelphia, Pa.

The same thought was forcibly expressed several weeks ago by Mr. William L. Batt, Deputy Director in the Division of Production in the Office of Production Management, in a speech before the American Society of Mechanical Engineers. He spoke as follows:

"It seems to me essential that we immediately create a small group of the ablest men in the country who would be charged with studying these long-range problems and working out solutions in advance. They ought to be set off in a corner by themselves, instructed

to forget all about the immediate problems of procuring war material, except as it affects the future national economy. They should set to work now on the preparation of an industrial demobilization plan. Nations have spent decades preparing plans for the conversion of a peace-time economy to a war-time economy. So far as I know, nobody has seriously undertaken the preparation of plans for the opposite process . . . converting a war-time economy back to a peace-time economy. That might involve the discovery and development of new processes and new

products for civilian consumption that could be manufactured on the same machines that now are turning out or preparing to turn out products that are useless in times of peace; plans for the absorption of our newly trained labor in peaceful pursuits; the fundamental policies of a foreign trade policy in a world that will be vastly different from that with which we have ever dealt before.

"This group would need inventors and research scientists, trade experts and fiscal experts, men of practical knowledge and great vision. They should devote their entire time to the formation of the best plans that could be evolved for the utilization of our entire resources for the improvement of our standard of living, for the protection of our national economy from the repercussion not of war but of peace, for the conversion of the processes of economic waste to the processes of economic usefulness."

At one point, we must make every effort to avoid and avert price rises such that we will be exposed to the disturbing effects of inflation and subsequent deflation. I doubt if the rapid price rise in the later years of the World War had any appreciable effect on the national output. The economic system was trying to allocate its limited product among customers in the only way it knew. There is no assurance that the process of selection by high price necessarily conforms to the nation's needs.

The first step, of course, is to strive for adequate capacity so that no such selection is necessary. But if and when it is, we should be prepared to do it by other methods of determining priorities, rather than by permitting price spirals to start. Fiscal policy will also be of great importance in determining the course of prices. One of the major objectives of the tax program should be to affect purchasing power in such a manner as to ease the adjustment to an expanding armament and perhaps even a diminishing consumer goods output. If we can keep prices under control, the postwar years will be that much easier.

But the greatest statesmanship is required in the area which I have called "structural changes." The war process will inevitably threaten our habits and institutions, both externally and internally. The processes of social change

CHEMICAL & BANK TRUST COMPANY

Founded 1824
165 Broadway, New York

CONDENSED STATEMENT OF CONDITION

At the close of business, March 31, 1941

ASSETS

Cash and Due from Banks	\$429,549,439.78
U. S. Government Obligations, Direct and Fully Guaranteed	251,408,280.47
Bankers' Acceptances and Call Loans	34,506,254.39
State and Municipal Bonds	71,580,923.29
Other Bonds and Investments	103,337,737.36
Loans and Discounts	115,908,458.23
Banking Houses	345,948.67
Other Real Estate	5,123,972.83
Mortgages	1,670,158.06
Credits Granted on Acceptances	3,384,228.36
Other Assets	3,350,561.68
	<u>\$1,020,165,963.12</u>

LIABILITIES

Capital Stock	\$20,000,000.00
Surplus	50,000,000.00
Undivided Profits	8,009,551.23
Dividend Payable April 1, 1941	900,000.00
Reserves, Taxes, Interest, etc.	3,422,469.83
Acceptances Outstanding	\$6,787,399.24
(less own acceptances held in portfolio)	2,968,976.43
Other Liabilities	155,329.63
Deposits (including Official and Certified Checks Outstanding \$26,834,469.84)	933,860,189.62
	<u>\$1,020,165,963.12</u>

U. S. Government Obligations and other securities carried at \$5,392,836.82 in the foregoing statement are deposited to secure public funds and for other purposes required by law.

Charter Member New York Clearing House Association
Member Federal Reserve System
Member Federal Deposit Insurance Corporation

will be greatly accelerated, and may be guided by what appears to be immediate necessity rather than long-run desirability.

It is futile even to attempt to outline the characteristics of the world ten years from now. But it is extremely important that, in this country we try to know what we are doing and where we are going. Depressions are always dangerous. We need to do a great deal of thinking and planning before our social and economic structure is again threatened by the strains of a postwar collapse. We are all well aware of the tremendous human and social cost of war-making. It is ironic and tragic that we must also recognize that the postwar period, in spite of the blessing of peace, can also be disastrous.

WARTIME PRODUCTION

(Continued from page 8)

nearly enough. The truth is that if we are going to do better, we must stop merely boasting about the wonderful industrial machine we have in the United States. Everybody knows by now that this is the greatest industrial nation on earth. But what everybody must realize is that all the facilities in the world for the production of electric toasters or typewriters or even passenger automobiles won't save England unless as much as practicable of that capacity is converted to the production of armaments. Potential capacity means little unless it is utilized. And if it is utilized it means simply that there will be fewer electric toasters and typewriters and passenger cars. Please do not misunderstand me and interpret what I have just said as meaning that I favor Hitlerizing the United States. But please understand me well when I say that this program is simply impossible of achievement unless all of us—as consumers—are willing to pay whatever price is necessary in terms of personal sacrifice.

There is a tremendous operating job ahead of us. We must see to it that contracts are placed where the best and most rapid production can be achieved. We must see to it that sub-contracting is used to the fullest possible extent so



We're blockaded, Mr. Jenks, and I'm sunk!

It's not that we mind working long hours now and then. These are busy times. But look—that pile of work just doesn't get any smaller and the other departments are complaining that they are being held up.



Why? I'll tell you. Every time you call me for dictation my other work must stop, and if I can't come the instant you call, you are delayed . . . and your work is slowed up.



Well, that day you complained and said you wished you had a magic notebook, I told Mary, my girl friend. She said, "What Mr. Jenks needs is a Dictaphone. So did my boss . . . and he got one."

"Now," Mary said, "Dictaphone leaves him undisturbed to do *his* work while I do *mine*. He doesn't have to wait for me, nor do I for him. We *both* get more done, more easily."



"While he's dictating, I can protect him from interruptions . . . answer phone calls and look up things for him. He can dictate *any* time—before or after hours, without requiring me. What's more, now I can keep up with my own work, too."

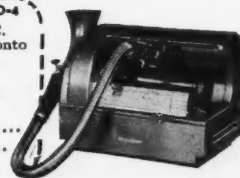
This modern dictating machine speeds production all through the office • It's easy to use • Always there—always ready • Puts everything on record • Catches every idea—without waiting.

DICTAPHONE

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In Canada: Dictaphone Corp. Ltd., 86 Richmond St., W., Toronto

- ☐ I should like to see the Dictaphone movie, "What's an office anyway?" showing how bottlenecks can be eliminated.
- ☐ I should like to try a Dictaphone Cameo Dictating Machine in my own office without obligation.

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Company.....
Address.....



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Cooling, filtering and humidifying are powerless to combat troublesome odors. You can't compromise with smells—you've got to remove them. And the only positive, foolproof, scientific method is to install DOREX odor adsorption equipment.

As simple as they are effective, Dorex Odor Adsorbers bring the contaminated air into intimate contact with highly activated coconut shell carbon—the identical medium used in war

gas masks—which instantly adsorbs, or extracts from the air, all the entrained gaseous impurities and holds them in a condensed state. When applied to an air conditioning system, the saving in conditioning new air alone will pay for the Dorex unit—frequently in but one year.

There is a special Dorex unit for almost every industrial or commercial odor problem and smaller sizes for independent use. Odors are a liability, a menace to employee health and to your business. Do something to control them NOW.

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Merck & Co., Inc.
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The Procter & Gamble Company
Standard Oil Company of N. J.
The Western Union Telegraph Co.
Westinghouse Electric & Mfg. Co.
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POSTUR-MATIC
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NEW folder shows the POSTUR-MATIC in detail and explains how this new posture chair works. Diagrams illustrate features and principles involved. Also tells about exclusive Do/More Triple Seating Service, available from a nation-wide staff of Posture Specialists. Write today for YOUR copy.

Now available for the first time, the Do/More POSTUR-MATIC, an outstanding advancement in Posture Seating. By the unique and amazingly simple device of providing scientifically shaped sections in the seat cushion, the POSTUR-MATIC reminds the occupant to maintain proper posture, automatically and comfortably.

If and when the user slips into a body buckling slump, the new POSTUR-MATIC urges him to return to that erect position, best for his comfort and well being.

See the POSTUR-MATIC at Domore dealer's, or write for new illustrated folder describing in detail this amazing new posture chair.

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415 Franklin St., Elkhart, Indiana

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CUT COSTS—SPEED PAYMENTS
AS 900 LEADING U.S. FIRMS DO!
INSTAL-VELOPES replace payment books, monthly statements on Installment Accounts.
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that all available facilities are utilized. We must not stop short until all of our plant and equipment and labor power is fully employed. Civilian consumption should not be cut just for the sake of sacrifice, but where civilian needs compete with armaments for labor and equipment, I am certain we all agree that there can be no question which should be given priority. We must use all our present great productive power to the fullest extent. We must also expand that power where expansion is essential to our doing an adequate job.

It seems to me dangerous to evade the issue. Certainly it ought to be perfectly plain that either we are in grave danger or we are wantonly wasting billions of dollars. I think we are in grave danger—danger so great that unless we are willing to work and sacrifice—give of our toil and sweat—then we might just as well throw up our hands and declare like honest men that democracy is not worth defending.

Alternative Costs

If we are disposed to worry about the cost of our program or about the cost of aid to Britain, consider what it would cost if Britain went down, and we were forced to transform this country into an armed camp, living at best on the constant brink of war. To do that, I prophesy we would spend at least twenty or thirty billion dollars a year, perhaps much more. Consider also the fact that France, whose leaders sought to avoid the cost of war or even adequate military preparedness by trying to appease, is paying out more today to the support of the German army of occupation than she paid for the support of her own defenses at the very height of the war.

The conclusion is inescapable. We must reassess the size of the job of defending democracy in terms of the effort being expended by the opponents of democracy. The hitting power of British production plus United States shipments must not only equal, but surpass the war production of Germany and the occupied countries. I specified United States "shipments" because production alone is not enough. If our defense materials—our planes and our tanks and our guns—aren't shipped, we will have failed in our job. Aid on the docks of Hoboken is not aid to Britain.

The bottleneck of shipping, along with the bottleneck of inadequate capacity, must be broken. It can be broken only by greater protection for existing merchant tonnage—this means more destroyers and long-range flying boats for Britain—and a greatly augmented program of ship construction. The British are now losing every week about 5 per cent of their total annual new ship construction. If every one of the 200 ships in the President's new program due to be completed by December 1942 were transferred to the British, they would be sunk in thirty weeks at the present rate of loss. If these losses continue, the only solution may be another Hog Island.

I have limited my remarks to production, because assisting the Army and the Navy to get greater production is our job in the defense organization. I have said nothing about the important factor of morale, not because it is not a vital part of a nation's strength, but because so much has been said and said well about the marvelous courage of the British people. And I have not talked about it for another reason. It is not our principal contribution to Britain's strength. She is abundantly providing for that herself. Let me add this much, however. We might build countless armaments for the defense of democracy, but if we had not the will to defend democracy, those armaments would be useless. We must build a devotion to democracy more fervent than the Nazi's devotion to totalitarianism. For our fierce love of liberty—when it becomes aroused—can be a weapon mightier than planes, or tanks, or guns.

Our number one responsibility, then, is simply to realize the size of the job to be done. I have tried here to give some idea of the magnitude of that job.

Secondly, we must set about immediately—we cannot afford to temporize—to translate that realization into planes and tanks and guns at a much faster pace than we are today. We cannot become the arsenal of democracy by merely saying we ought to. It takes man hours and steel and machine tools in quantities bigger than anything we have yet seen.

And finally, we must hold high the hope of freedom from oppression, not alone for the free nations of the world, but for all the peoples of the earth.

GOOD BUSINESS NEWS

Three year record shows 80% improvement



One of the *Midwest Mfg. Corporation's real problems was a lack of capital to handle the potential sales expansion. Neither in theory nor practice was OPEN ACCOUNT financing new to the management. They had been selling receivables to local banking connections on occasion. But the limitations were unsatisfactory. In August, 1937, they made arrangements to use COMMERCIAL CREDIT service. With the change came immediate improvement. Frozen funds were released and turned over at a new pace. For three years, the service has been more than adequate for every need. Except for substantial increases in salaries of the stockholder owners, in lieu of dividends, Net Worth would have shown a considerably larger increase.

Says the president: "A great deal of this is due to the flexibility of the banking arrangements on your OPEN ACCOUNT plan. It has been gratifying to work with you and to have this service."

* * * *

We have adapted our service to meet the needs of many different industries. We can show you how, with no additional capital investment, you can utilize advances against inventories and receivables and increase your profits. We are also prepared to finance your purchases of needed productive equipment. Write for copies of "Capital at Work" and "Comparative Costs of Financing." Address Dept. DR.

**A fictitious name, but the facts and figures, taken from our files, can be verified.*

COMMERCIAL CREDIT COMPANY

"Non-Notification" Open Account Financing

BALTIMORE

BOSTON NEW YORK CHICAGO SAN FRANCISCO LOS ANGELES PORTLAND, ORE.

CAPITAL AND SURPLUS MORE THAN \$60,000,000

YOUR
LETTERHEAD
COUNTS TWICE FOR YOU
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PAPER



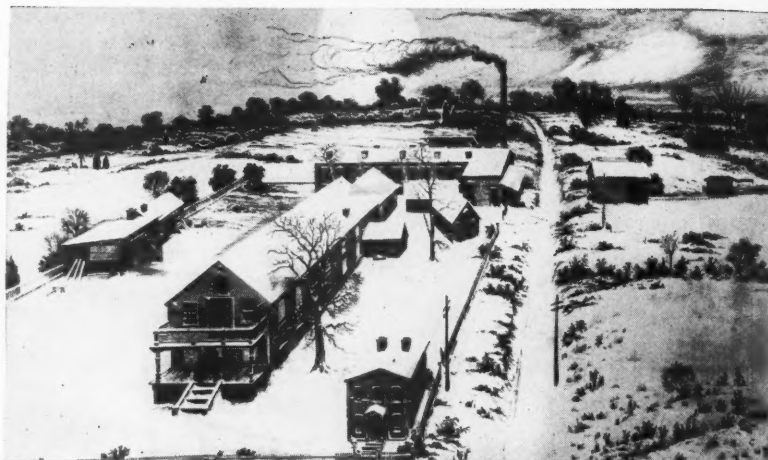
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EDISON'S MENLO PARK LABORATORY IN THE '70'S—PHOTOGRAPH FROM "MEN AND VOLTS"

THE BUSINESS BOOKSHELF

BUSINESS . . . FINANCE . . . ECONOMICS . . . GOVERNMENT

A SURVEY of the output of American factories during the period 1899 to 1937 appears in a 708-page publication of the National Bureau of Economic Research: *The Output of Manufacturing Industries, 1899-1937*, by Solomon Fabricant, \$4.50.

From a general summary of broad changes in factory production and their significance for the national economy, the book proceeds to a detailed presentation of indexes of output. These are of all manufacturing combined, of

fifteen groups of kindred industries, and of 140 individual industries. Measurements used give weight to new or growing industries and indicate a higher rate of advance since the turn of the century than is shown by measurements based on older, more static industries.

WRITTEN to fill a gap between advanced and elementary treatises on money and economic activity and welfare, *Introduction to Monetary Theory*,

CURRENT READING

BOOK	SUMMARY
MEN AND VOLTS, by John L. Hammond. J. B. Lippincott, 448 pages, \$2.50.	History of the General Electric Company and beginnings of the electric industry, giving credit to its pioneers.
THE RISE OF AMERICAN NAVAL POWER, by Harold and Margaret Sprout. Princeton University Press, 405 pages, \$3.75.	Development of American naval policy from 1776 to 1918; deals with policy rather than battles.
TOWARD A NEW ORDER OF SEA POWER, by Harold and Margaret Sprout. Princeton University Press, 332 pages, \$3.75.	Its subject the Washington Naval Conference of 1921 and 1922 and the period from 1918 to 1922, it investigates the forces, decisions and intrigue that affected the size of battle fleets.
SABOTAGE, HOW TO GUARD AGAINST IT, by H. D. Farren. National Foremen's Institute, 56 pages, \$1.	Lists precautions to be taken against sabotage; advises readers to guard their speech and to be wary of possible secret agents. Some of the saboteur's methods are described.
THE ECONOMICS OF CORPORATE ENTERPRISE, by Norman S. Buchanan. Henry Holt & Co., 500 pages, \$3.25.	Familiar problems of corporate enterprise, treated from the less familiar ground of modern economic analysis, showing the impact of changes in economic data upon output, prices, profits, and general behavior of individual firms, emphasizing the theory and logic underlying outwardly different forms and factual situations.
ADVENTURING FOR DEMOCRACY, by Wilbur C. Phillips. Social Unit Press, 397 pages, \$3.	Autobiography of an inventor of sociological techniques whose plan for a gradual extension of democratic ways from politics to economics, if widely adopted, would cause many changes in the present social and political system.

by Lester U. Chandler, presents the essential principles of several leading types of monetary theory. It indicates briefly how and to what extent these theories can be reconciled and integrated. It classifies rather than criticizes them. (Harper & Brothers, 228 pages, \$1.50.)

Business Life Insurance, by Willard B. Bellack. C. C. Nelson, 72 pages, \$1. Brief enough for spare time reading, this book offers a non-technical explanation of the use of life insurance in business. It recommends a mathematical formula for determining the amount which should be carried on top executives.

The Art of Practical Thinking, by Richard Weil, Jr. (Simon & Schuster, 276 pages, \$2.) In which the president of L. Bamberger & Co., Newark, N. J., department store, takes the reader on a 12-cylinder tour of thinking processes. It's a book for reading and re-reading. In simple "You and I" conversational style, Mr. Weil briefs the major history and facts of logic. He gives rules, regulations, and illustrations which help thinking, explaining their uses and their limitations. In a final section he discusses the application of thinking to administrative problems, publicity and public relations, financial control, management, and merchandising.

Union Policies and Industrial Management, by Sumner H. Slichter. (Brookings Institution, 611 pages, \$3.50.) Collective bargaining may be regarded both as a method of labor price-making and as a method of building up a system of "industrial jurisprudence." It is mainly with the latter aspect that this study is concerned.

The effect of competition from other industries, from non-union plants, from low cost union plants, and from substitute products is presented as a condition which, although little recognized by many unions, over a period of years makes the plant demand for labor an elastic one.

Among questions which the book takes up are the following. Are union restrictions on number of apprentices reasonable? Does the closed shop produce labor shortages? What have been the results of competition between union and non-union plants?

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\$ 20	\$ 10.38	\$ 3.63	\$ 1.95			
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100	51.88	18.15	9.75	\$ 7.66	\$ 6.41	
150	77.82	27.23	14.62	11.49	9.62	
200	103.77	36.31	19.50	15.32	12.83	
250	129.71	45.39	24.37	19.15	16.04	
300	155.65	54.46	29.25	22.98	19.24	

Above payments include charges of 2½% per month and based on prompt payment are in effect in seven states. Due to local conditions, rates elsewhere vary slightly.

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City.....State.....

Job evaluation is a process for gaging each job's worth; merit rating is a process for determining each employee's worth in his job. How these may be applied in a business is told in a loose-leaf book written by Eugene J. Bengt. *Job Evaluation and Merit Rating*. National Foremen's Institute, 71 pages, 26 charts, \$7.50.

Several ways of employing job evaluation and merit rating are discussed, among them the "job factor comparison" method introduced in 1926 and a new "man-job rating" plan which undertakes to match an employee against his particular job and rate his merit in it.

THE middle positions in organization charts are the scene of a book called *Middle Management*, by M. C. H. Niles (Harper & Bros., 284 pages, \$3). It analyzes the place and duties of men who are below top management and above direct supervision.

Much of the book's detail is drawn from experience with life insurance companies, but the basic problems are common to middle management in many lines. The author describes departmental routine and the flow of material, discusses the cross-wise relationships of middle management, and reviews the mental attitudes, good and poor, in junior administration. The writing is definite and concise. Many case histories are used as illustrations.

ACHIEVING and maintaining prosperity is the subject of a restrained but ambitious book called *The Control of Business Cycles*, by John P. Wernette. (Farrar & Rinehart, 206 pages, \$1.75.)

The author is concerned not with business cycle description, analysis, and causes as such; only with information relevant to the problem of what to do to achieve and maintain stabilized prosperity. Several proposals by different men are analyzed and given places in a tentative pattern for avoiding depressions. No one remedy is suggested.

Industrialization of Japan and Manchukuo, 1930-1940; Population, Raw Materials, and Industry, by E. B. Schumpeter, G. C. Allen, M. S. Gordon, and E. F. Penrose, 972 pages, \$7.50.

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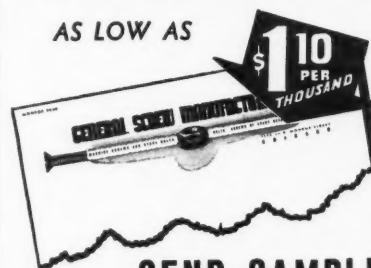
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this extensive study indicates some of the economic grievances of Japan, showing what helped cause them and to what extent Japan's national economy is well entrenched.

Written in the straight-forward style of a news story, but accompanied by a wealth of figures, the volume makes clear a great many things about the Far Eastern empire: causes of discrepancy in government statistics; declining population; importance of the Netherlands East Indies; results of the development of cheap hydroelectric power; progress in electrochemistry; and financial maneuvers.

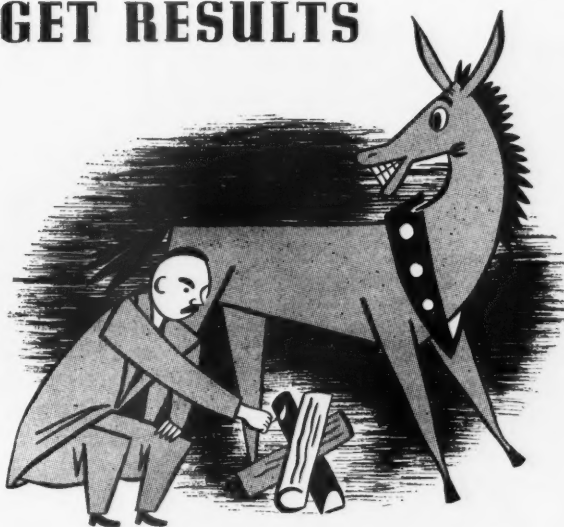
ALTHOUGH there have been studies of the bankruptcy acts and of the legal points of corporate reorganization, there does not seem to be much listed on preventing imminent business failures and rebuilding bankrupt enterprises from the viewpoint of the manager of a bankrupt or nearly bankrupt business. A recently published study on these subjects is *Corporate Readjustment and Reorganization*, by Louis P. Starkweather and Harry L. Kuntzleman. (New York University Book-store, 90 pages, \$2.)

Most of the material appears in the briefest of outline form, in long series of classifications, headings, sub-headings, and minor sub-headings, without explanatory matter. The chapters include Corporate Failure and its Causes; Detecting Failure Tendencies; Averting Threatened Failure; Analyzing and Testing the Reorganization Plan; Internal Reconstruction, Rehabilitation, and Reorganization. Each chapter is preceded by a brief narrative-style discussion of the topic's significance.

In the russet-colored, paper-bound monographs printed for use of the Temporary National Economic Committee appear studies of a great many aspects of economic America. There are 43 of these publications scheduled; studies made for the TNEC, not transcripts of personal testimony or conclusions of the committee. The hearings are published in 31 parts and three sub-parts. They may be obtained from the Superintendent of Documents, Government Printing Office, Washington.

The monographs did not appear in numerical order. Number 15, *Financial Characteristics of American Manu-*

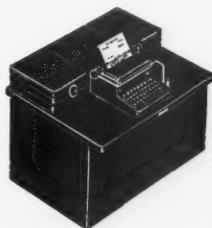
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facturing Corporations, by Charles L. Merwin, Jr. (TNEC, 456 pages, 40 cents), appeared before some lower numbered ones. Monograph 15 deals with the profits of large and small American manufacturing corporations, their dividends, working capital, fixed capital, and the source and disposal of corporate funds. The companies are

classified in tables and charts by size and line of business.

Among other TNEC publications available are: No. 41, *Price Discrimination in Steel*, by John M. Blair and Arthur Reeside, 63 pages, 10 cents.

No. 35, *Large Scale Organization in the Food Industries*, by A. C. Hoffman, 185 pages, 20 cents.

OVER THE EDITOR'S DESK

CONTRIBUTORS . . . COMING NEXT MONTH

THE review of postwar depressions by Willard L. Thorp (pages 13-17) is from a paper presented before the annual meeting of the American Economic Association. It has also been published in that association's "Papers and Proceedings," Vol. XXX, No. 5, of the *American Economic Review* together with other papers and discussions on related subjects (price \$1.25, publication office, 450 Ahnaip Street, Menasha, Wis.). As long ago as 1926, Mr. Thorp had begun to report studies of the uneven course of business, then in *Business Annals*, published by the National Bureau of Economic Research.

A trustee of the Associated Gas & Electric Corporation, Mr. Thorp, as most readers know, is also editor of DUN's REVIEW and Director of Economic Research for DUN & BRADSTREET, Inc. A year or two ago he was engaged in two other activities, as special economic advisor to the Secretary of Commerce—then Harry L. Hopkins—and as director of economic studies undertaken in the Department of Commerce for the TNEC.

THE 150-year chart which accompanies "Postwar Depressions" is reproduced through the courtesy of the Cleveland Trust Company, the original source of this month-by-month business activity series.

Information about this series—what the components are, how they have been combined, what the monthly figures have been over the past 150 years—is available from the Cleveland Trust Company, Cleveland, Ohio.

The wholesale commodity price series used in the Cleveland Trust Company's chart is that of Professors War-

ren and Pearson (Cornell University) recomputed so that the average for 1929 equals 100. This series uses the indexes of the U. S. Bureau of Labor Statistics for 1890 and later years. From 1795 to 1798 the Smith series was used, and from 1790 to 1795 a British price index was used.

AFTER many months without a single report of the attainment of a perfect score on several business quizzes which have appeared during that time, William E. Hakenholz, manager of sales promotion for Union Petroleum Company, Lexington, Neb., owns up that he at least is entitled to one of the Certificates of Distinction offered by DUN's REVIEW. Mr. Hakenholz's achievement was on the marketing and advertising quiz, in the February number.

Mr. Hakenholz must have been following DUN's REVIEW quizzes for some time, for he writes that he had a witness to his feat, though it must be two years now since we have asked for witnesses to bolster such a claim. For one thing the editors felt that it was wholly unnecessary to support the word of readers of this magazine!

WELL known to DUN's REVIEW readers is Dr. L. D. H. Weld (pages 9-12); his career was last summarized three months ago. We remind all that back figures and various other aids are available to users of the Trade Barometers.

ANOTHER aspect of the work of the Office of Production Management, subcontracting, is scheduled for discussion in an article for next month. Included in its treatment of the subject is an outline of the operation of the recently organized regional offices, which offer to

nearby manufacturers the help of special staffs on financial, engineering, and procedural problems.

Thirty-six of these regional offices have been established by the Defense Contract Service of the OPM's Production Division, in the offices of the twelve Federal Reserve Banks and their 24 branches. In each Federal Reserve District, contract work is under the direct supervision of a District Coordinator—a business man of recognized competence.

Also planned for publication soon is an excursion into the vagaries of radio advertising. With annual time sales up to \$160,000,000 and another \$40,000,000 or more spent for talent, radio is a full-fledged competitor among longer established media, newspapers and magazines—or the complement of them, depending upon how you feel about it.

Three major aims of the article are to compare the growth and present importance of radio with that of other advertising media; to distinguish the qualities in which radio differs from other media, principally in the larger degree in which it is show business; and to outline the better-established methods for determining the effectiveness of radio programs as advertising instruments.

INCLUDED in other plans for the future is a discussion of State and local co-operation with national defense activities, not only in the organization of home defense, but equally important, in adjustment of suddenly much expanded communities to extended needs for civic services.

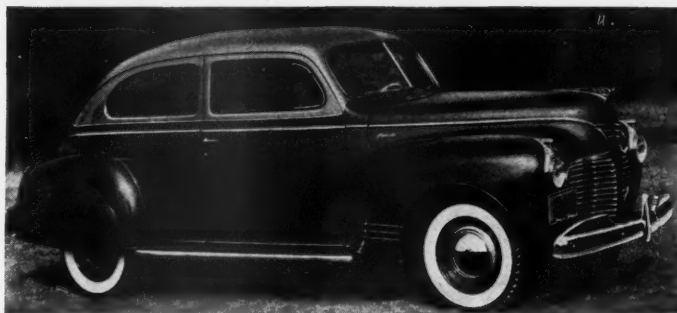
DUN'S REVIEW

290 BROADWAY NEW YORK, N. Y.

SUBSCRIPTION: \$4 a year; \$10 for three years; 35 cents a copy. Outside U. S. \$5 a year.

Willard L. Thorp, Editor; Norman C. Firth, Managing Editor and Business Manager; Edwin B. George, Walter Mitchell, Jr., A. M. Sullivan, Associate Editors; J. A. D'Andrea, Statistician; Clarence Switzer, Art Director; H. C. Daych, Advertising Manager.

DUN'S REVIEW goes to each company using the services of DUN & BRADSTREET, INC. Service subscribers may obtain additional subscriptions to the magazine for executives, branches, and so on, at special rates. . . . Published monthly. April, 1941, Vol. 49, No. 2156. . . . The contents of this magazine are indexed in its December issue and in the Industrial Arts Index. . . . Member C.C.A. . . . Copyright 1941, DUN & BRADSTREET, INC.



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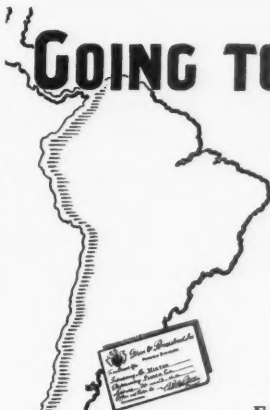
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ACCORDING to Nicolson, his biographer, Dwight Morrow frequently told of an experience which he and his wife had in Rugby, England in 1907. They had wandered about until they were thoroughly lost, so inquired of a twelve-year-old boy the way to the station.

"Well," he answered, "you turn to the right down there by the grocer's shop, and then take the second to the left. That will bring you to a place where four streets meet. And then, sir, you had better inquire again."

When it seemed difficult and impossible to determine a complete course of action, to arrive at some ultimate goal, Dwight Morrow used to recall this incident to urge that at least we shall advance in the right direction, even if only a little way. Long-range planning is exceedingly difficult today, but that is no justification for standing still. At least, we should try to pass the grocer's shop and take the second to the left.

Willard L. Thorp.
E D I T O R

